

**CULTURAL RESOURCE SURVEY AND TESTING PROGRAM
FOR THE NEUMANN PARCEL MAP PROJECT,
NEAR RAMONA, SAN DIEGO COUNTY, CALIFORNIA
(TPM 20962, Log No. 05-09-021, APN 280-130-03)**

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Neuman Parcel Map

Permit Numbers/DPLU Environmental Log No:

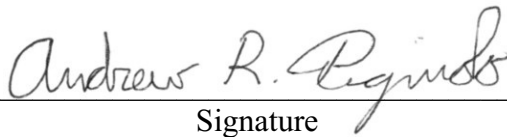
TPM 20962

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Report Title: Cultural Resource Survey and Testing Program for the Neumann Parcel Map Project, Near Ramona, in San Diego County, California

Type of Study: Cultural Resource Survey and Testing Program

New Sites: CA-SDI-18321 (NM-S-1), CA-SDI-18322 (NM-S-2),
P-37-028204 (NM-I-1), P-37-028205 (NM-I-2), P-37-028206 (NM-I-3)

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LIST OF ACRONYMS AND ABBREVIATIONS

APE (Area of Potential Effects)
ARMR (Archaeological Resource Management Report)
CA (California)
California Register (California Register of Historic Resources)
CEQA (California Environmental Quality Act)
CM (Centimeter)
CRM (Cultural Resource Management)
EIR (Environmental Impact Report)
Ft (Feet)
Laguna Mountain (Laguna Mountain Environmental, Inc.)
Local Register (San Diego County Local Register of Historic Resources)
M (Meter)
MOU (Memorandum of Understanding)
MUP (Major Use Permit)
NEPA (National Environmental Policy Act)
NHPA (National Historic Preservation Act)
RPO (Resource Protection Ordinance)
SCIC (South Coastal Information Center)
SDI (San Diego County)
SDM (San Diego Museum of Man)
STP (Shovel Test Pit)
TPM (Tentative Parcel Map)

EXECUTIVE SUMMARY

Laguna Mountain Environmental, Inc. (Laguna Mountain) conducted an archaeological and survey and testing program of an approximately 39-acre property for a proposed lot split for residential development within the community of Ramona in the County of San Diego. Archaeological and historical research related to the survey included a records search, literature review, examination of historic maps, and archaeological field inventory of the property.

Cultural resource work was conducted in accordance with the California Environmental Quality Act (CEQA) and the County of San Diego implementing regulations and guidelines including the County of San Diego Resource Protection Ordinance (RPO). The County of San Diego will serve as lead agency for the project and CEQA compliance.

Records searches at the South Coastal Information Center and the San Diego Museum of Man indicated that the project area had not been previously surveyed, but that a variety of studies have been conducted in the vicinity of the project and 36 cultural resources have been previously recorded within a one mile radius of the project. Prehistoric sites had been recorded directly adjacent to the south side of the project, so a survey of the area was warranted.

The survey of the project area was conducted on February 15, 2007 by Mr. Andrew R. Pignuolo, RPA. The majority of the project area was surveyed on foot in 10 to 15 meter transect intervals. The survey resulted in the identification of two archaeological sites [CA-SDI-18321 (NM-S-1) and CA-SDI-18322 (MN-S-2)] within the project area along with three isolated artifacts [P-37-028204 (NM-I-1), P-37-028205 (NM-I-2), and P-37-028206 (NM-I-3)]. Site CA-SDI-18321 consists of a Late Prehistoric temporary camp with four loci at the head of a drainage. Site CA-SDI-18322 was probably a larger site, but has been heavily impacted by grading and only a large bedrock milling feature and associated cultural material remain. Isolate P-37-028204 consists of two Santiago Peak Volcanic bifacial thinning flakes. P-37-028205 is a single Tizon Brown Ware sherd and P-37-028206 is a shell button.

The presence of the two archaeological sites within the potential project impact area required that a testing program be completed to assess integrity and to recover data to determine the nature and extent of these resources. Under current County guidelines both site CA-SDI-18321 and CA-SDI-18322 qualify as significant for the purposes of CEQA. The testing program was conducted between June 12 and 25, 2007. Project personnel during the testing program included Mr. Andrew R. Pignuolo, RPA, Ms. Elizabeth Davidson, Mr. Jose “Pepe” Aguilar, Ms. Heather Thomson, and Ms. Julie Roy. Mr. Gabe Kitchen and Mr. Clinton Linton of Red Tail Monitoring & Research, Inc. served as Native American monitors. The testing program included documentation of the bedrock milling features, artifact surface collection, the excavation of 34 shovel test pits (STPs) and two test units at CA-SDI-18321 Locus A-D and 5 STPs and one test unit at site CA-SDI-18322. The surface collection and testing recovered a total of 345 artifacts from all four loci of CA-SDI-18321 and 256 artifacts from CA-SDI-18322.

The testing program established subsurface deposit boundaries and adequately served to evaluate and recover data from these sites without constraints. Artifacts, photographs, and project records from this survey and testing program will be temporarily curated at Laguna Mountain until final curation arrangements can be made at the San Diego Archaeological Center or another appropriate regional repository.

The testing program determined that Locus A and B of site CA-SDI-18321 and site CA-SDI-18322 are prehistoric temporary camps with associated bedrock milling. CA-SDI-18321 Locus A and Locus B and site CA-SDI-18322, were determined to have intact subsurface deposits with the potential to yield additional important information. The information contained in these deposits can address important research questions developed in the research design. The subsurface deposits contained shell beads, obsidian, time-diagnostic, projectile points, lithic tools, groundstone tools, debitage, and marine shell and faunal bone in sufficient quantities to address questions developed in the research design.

Site CA-SDI-18321 and site CA-SDI-18322 are considered significant resources under current County guidelines for determining resource importance and criteria D (Ability to yield important informants) under CEQA. These resources are recommended as eligible for nomination to the California Register of Historical Resources (California Register) based on their potential to provide important information on prehistory. Site CA-SDI-18321 and site CA-SDI-18322 do not meet the criteria for significance under County RPO.

CA-SDI-18321 Locus C and D did not have associated subsurface deposits or sufficient quantities to address questions developed in the research design. The information contained in these resources has been recovered during the testing program and no adverse effects will result from impacts to these areas. Isolates P-37-028204, P-37-028205, and P-37-028206 as isolated items do not qualify as eligible for the California Register or the County RPO and no further work is needed to address these resources.

Impacts to Locus A, B, and D of site CA-SDI-18321 and site CA-SDI-18322 will be avoided, and these resources will be incorporated into open space easements. Current plans indicate direct and indirect impacts are proposed for portions of site CA-SDI-18321. Locus C will be directly impacted by brush clearance within the limited building zone. Locus A, B, and D will not be directly impacted by the project and will be placed in a dedicated open space easement. Site CA-SDI-18322 is not within a direct impact area and will be within proposed open space. Indirect impacts to Locus A, B, and D of CA-SDI-18321 and CA-SDI-18322 will be mitigated through permanent fencing of the open space easement. Isolates P-37-028204 and P-37-028206 will be directly impacted by the project while isolate P-37-028205 is within a proposed open space easement and will not be directly impacted.

In addition to dedication of the open space easement and mitigation of indirect impacts to Loci A and B of site CA-SDI-18321 and site CA-SDI-18322, construction monitoring is recommended to mitigate any additional cultural components that might be encountered during grading.

1.0 INTRODUCTION

1.1 Project Description

1.1.1 Project Summary

The approximately 39 acre project area is located in the northwestern portion San Diego County near the community of Ramona in the County of San Diego (Figure 1). It is located southwest of Goose Valley and north of Hatfield Creek north of Highway 78. The project is located at 18489 Ramona View Drive and consists of APN# 280-130-03. The project is mapped in Township 13 South, Range 1 East, in the southwest quarter of Section 12 as shown on the Ramona USGS 7.5' Quadrangle (Figure 2).

The proposed tentative parcel map (TPM 20962) project is a lot split for residential development near the community of Ramona. As part of the project, development including house pads, parking areas, access roads, septic systems, and utilities would be graded and excavated. The project is limited to the 39-acre proposed development area and does not include off-site improvements (Figure 3).

The archaeological survey and testing program was conducted pursuant to the California Environmental Quality Act (CEQA), and respective County of San Diego implementing regulations and guidelines including the Resource Protection Ordinance (RPO). The County of San Diego will serve as lead agency for CEQA compliance. The archaeological survey was conducted to determine if any cultural resources eligible for inclusion in the California Register of Historic Resources (California Register) or significant under the Resource Protection Ordinance (RPO) will be affected by this project. The testing program was conducted to assess the integrity of the cultural resources that would be impacted by the project and determine if additional data recovery would be necessary under the new County Significance guidelines.

1.1.2 Project Personnel

The cultural resource inventory and testing program has been conducted by Laguna Mountain Environmental, Inc. (Laguna Mountain), whose cultural resources staff meet state and local requirements. Mr. Andrew R. Pigniolo served as Principal Investigator for the project. Mr. Pigniolo is a member of the Register of Professional Archaeologists (RPA; previously called SOPA) and meets the Secretary of the Interior's standards for qualified archaeologists. He is also on the County of San Diego's list of qualified archaeologists. Mr. Pigniolo has an MA in Anthropology from San Diego State University and has extensive experience in the San Diego region. The resume of the Principal Investigator is included in Appendix A.

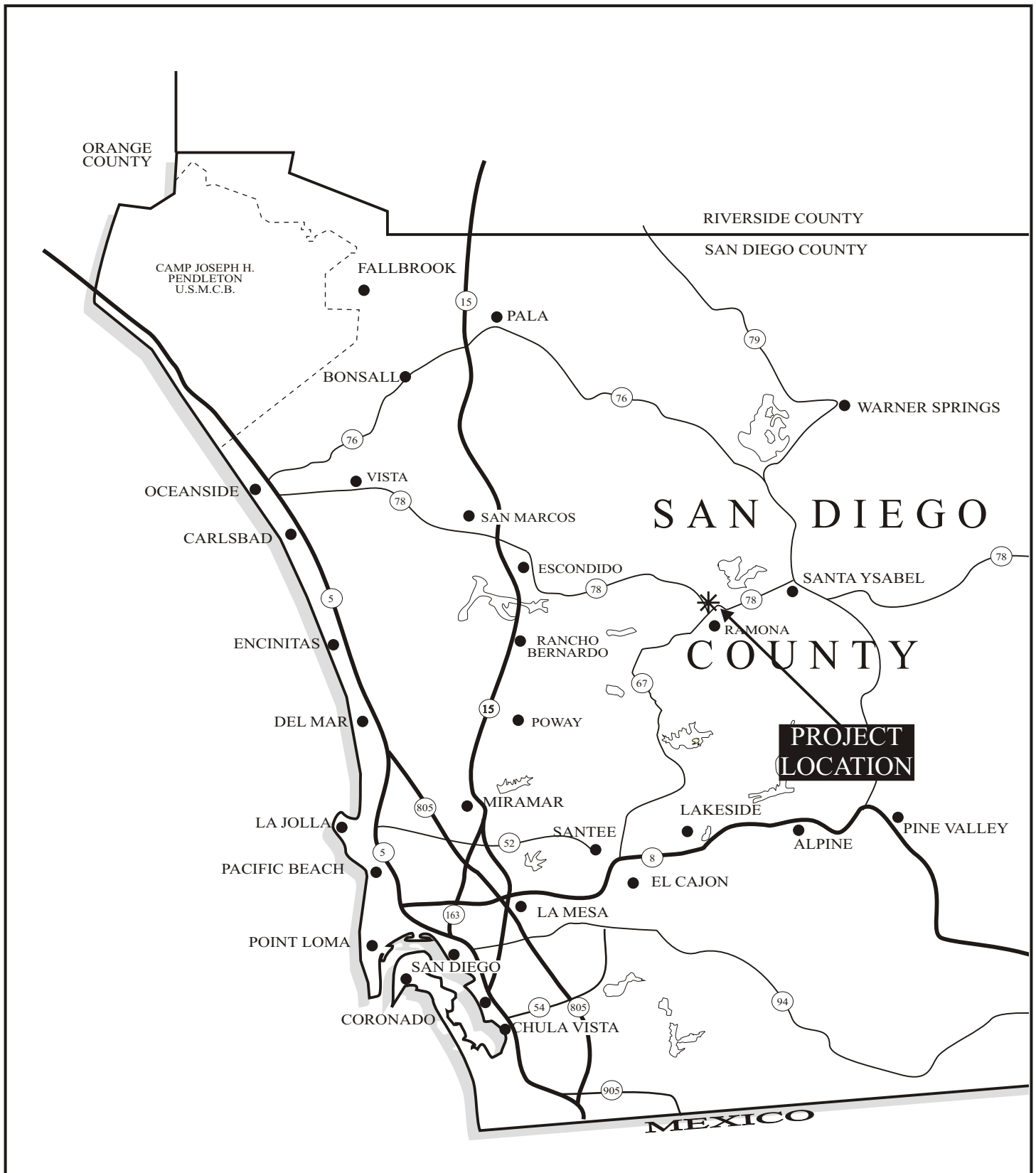
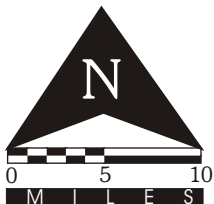
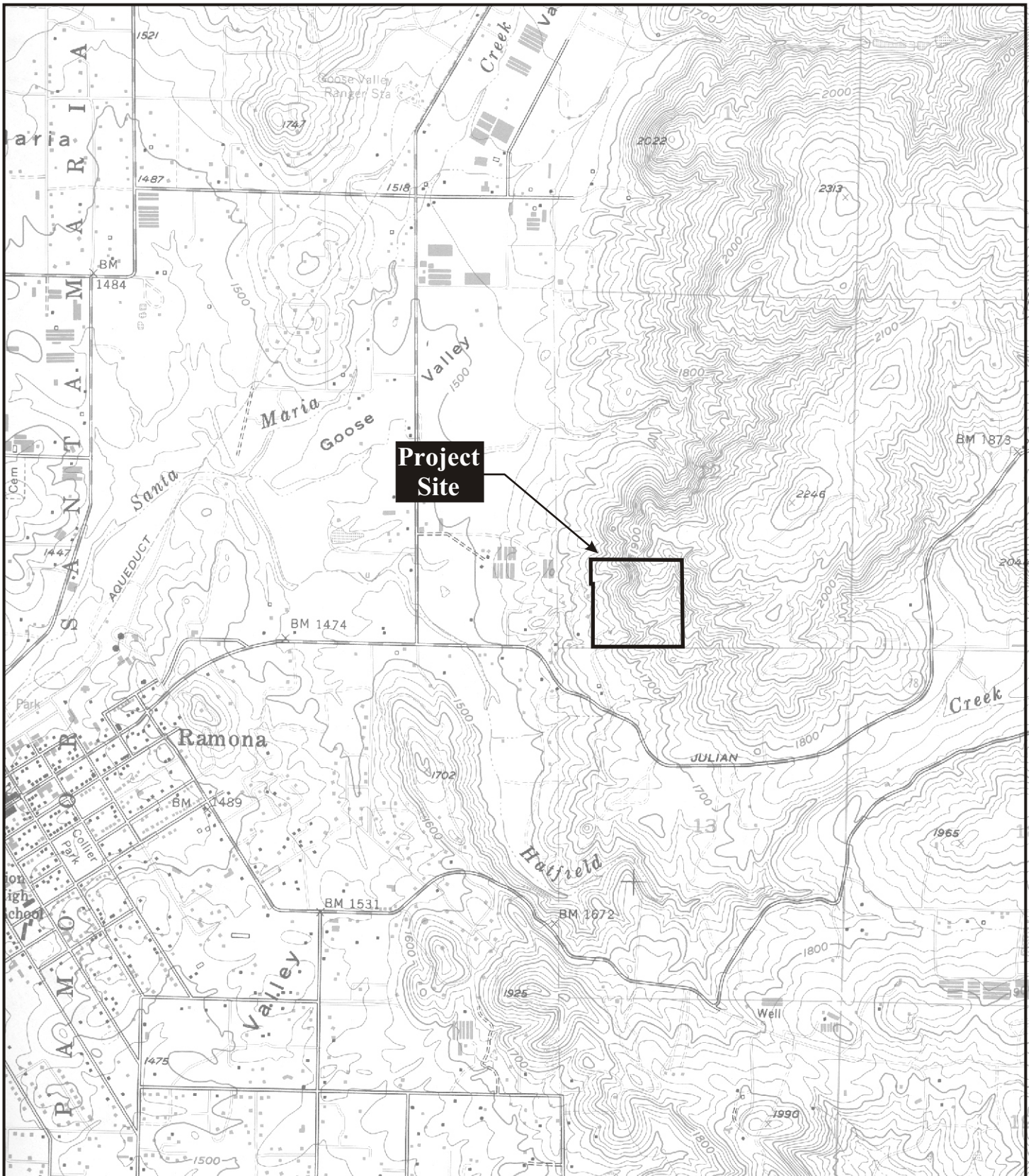


Figure 1
Regional Location Map



Laguna Mountain Environmental, Inc.



SOURCE: USGS 7.5' Ramona Quadrangle

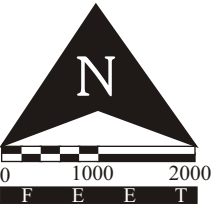


Figure 2
Project Location

PRELIMINARY GRADING PLAN

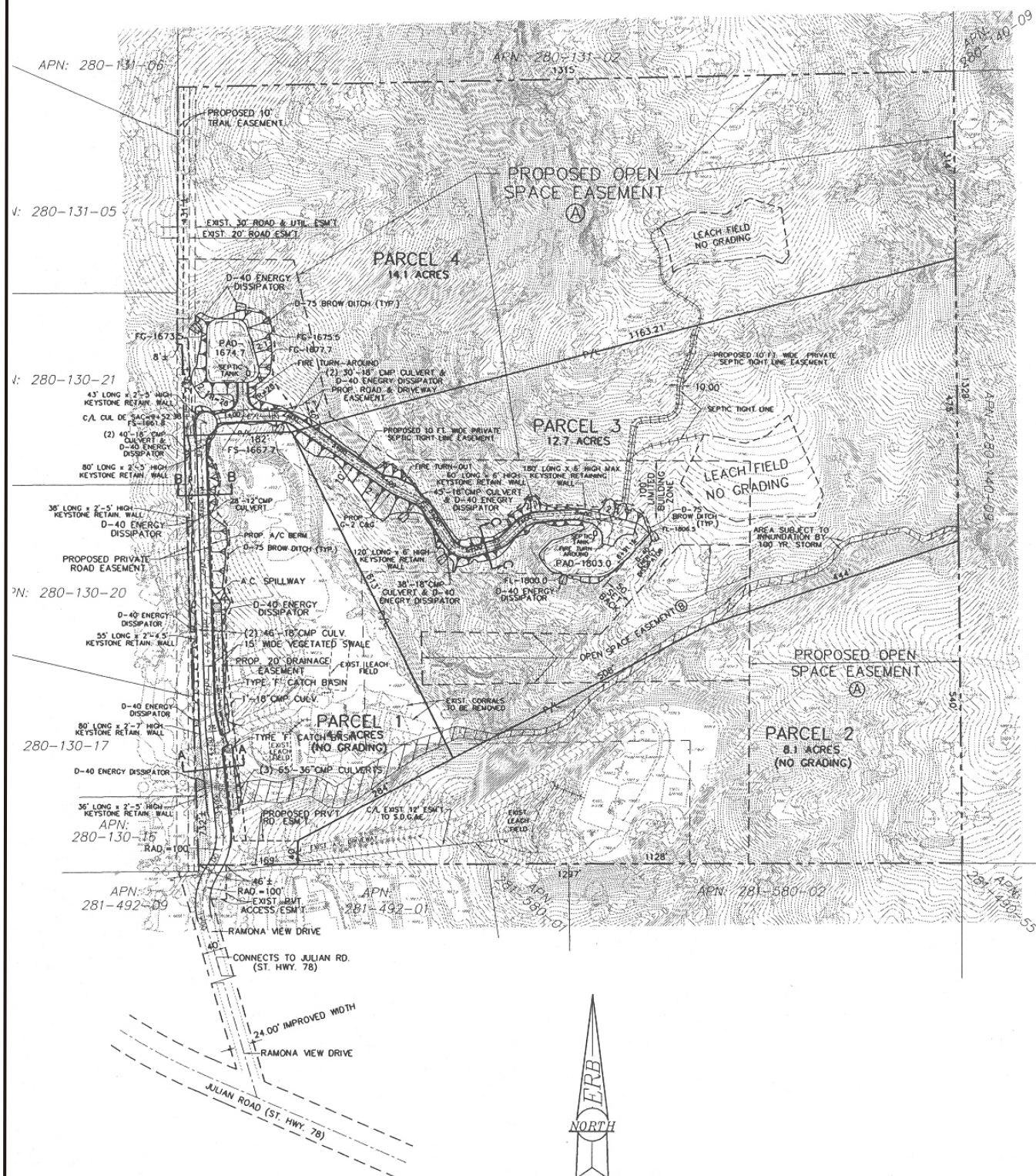


Figure 3

Project Plan



Laguna Mountain Environmental, Inc.

Ms. Heather Kwiatkowski served as Associate Archaeologist for the survey phase of the project, assisting in report preparation for both during the survey and testing phases. Ms. Kwiatkowski has a BA in Anthropology from the University of Tennessee, Knoxville and is currently completing her MA in Applied Anthropology at San Diego State University. She has more than eight years of archaeological field experience, six of which are in the southern California area.

The testing program was conducted by Mr. Andrew R. Pignuolo, RPA, with Ms. Elizabeth Davidson serving as Senior Archaeologist, leading the field excavation, cataloguing, and analysis. Ms. Davidson has a MA in Archaeology and Ancient History from the University of Leicester in England. She has more than five years experience in the archaeology of southern California.

Ms. Elizabeth Davidson was assisted in the field by Mr. Jose “Pepe” Aguilar, Ms. Heather Thomson, and Ms. Julie Roy. Mr. Aguilar and Ms. Roy hold BAs in Anthropology from the University of California, San Diego, and both have more than four years archaeological experience in the area. Ms. Thomson holds an Associate Degree in Archaeology from Palomar College, and she has more than six years experience in Southern California archaeology.

Mr. Clinton Linton and Mr. Gabriel Kitchen working under Red Tail Monitoring & Research served as Native American monitors for the project. Both Mr. Linton and Mr. Kitchen are Kumeyaay Indians from the Santa Ysabel and Mesa Grande Reservations in San Diego County. Both have experience in local archaeological monitoring.

1.1.3 Structure of the Report

This report follows the County of San Diego Report Format and Content Requirements for cultural resources which is a modified version of the Archaeological Resource Management Report (ARMR) Guidelines. The report introduction provides a description of the project and background on the project area, as well as any previous research. Section 2 describes the guidelines for determining archaeological significance. Section 3 describes the research design, while Section 4 describes the survey and testing methods and results including individual site descriptions and artifact analysis. Section 5 provides the interpretation of any identified resources and impacts to those resources, and Section 6 includes a discussion of mitigation measures and recommendations for the project.

1.2 Existing Conditions

The following environmental and cultural background provides a context for the cultural resource inventory.

1.2.1 Environmental Setting

The project area is located in the northwestern portion of San Diego County within the foothills and valleys of the interior region on the eastern side of Santa Maria Valley. The property is located southwest of Goose Valley and just north of Hatfield Creek north of Highway 78. A large portion of the property includes steep slopes adjacent to a small peak, the crest of which falls outside of the

current project area. The region contains numerous scattered bedrock outcrops and small seasonal drainages. Elevations range from 1700 to 1900 feet above mean sea level (MSL). The western portion of the property has been partially graded and contains a barn with a small residence. A larger residence is present on a ridge along the southern portion of the project area. Geotechnical testing has also resulted in brushing and disturbance to certain areas of the project.

The geomorphology of the project area is largely a product of the region's geologic history. During the Jurassic and late Cretaceous (>100 million years ago) a series of volcanic islands paralleled the current coastline in the San Diego region. The remnants of these islands stand as Mount Helix, Black Mountain, and the Jamul Mountains among others to the west of the project area. This island arc of volcanos spewed out vast layers of tuff (volcanic ash) and breccia that have since been metamorphosed into the Santiago Peak Volcanic formation. These fine-grained rocks provided a regionally important resource for Native American flaked stone tools.

At about the same time, a granitic and gabbroic batholith was being formed under and east of these volcanoes. This batholith was uplifted and forms the granitic rocks and outcrops of the Peninsular Range and the foothills that underlies the current project area. In San Diego County the large and varied crystals of these granitic rocks provided particularly good abrasive surfaces for Native American seed processing. These outcrops were frequently used for bedrock milling of seeds.

The batholith contains numerous pegmatite dikes. The Ramona Mining District, approximately 2 miles east of the project area, includes a concentration of these dikes. These dikes would have provided a good source of quartz, a material used by Native Americans for flaked stone tools and ceremonial purposes.

As the Peninsular Batholith rose, it warped and metamorphosed the overlying sediments, forming the Julian Schist (Remeika and Lindsay 1992). This formation contains quartzite, a material also used for Native American flaked stone tools and common within the project area. Its relatively poor flaking qualities made this quartzite less popular for tool making than the quartz and Santiago Peak materials.

During the Eocene, a series of major rivers crossed southern California from sources to the east in what is now Sonora, Mexico. These huge river systems carried a series of volcanic and quartzite rocks that were transformed into well-rounded cobbles during their long water transport. One of the main river channels passed through the Julian area and south of Ramona to the vicinity of San Vicente Reservoir before spreading out on the coastal plain. The remnants of this river channel include deposits known as the Ballena Gravels. These well rounded volcanic and quartzite cobbles outcrop approximately a mile and a half south of the project area and provided a source of both flaked lithic material and the raw material for groundstone tools to the prehistoric people of the region.

The soils on the property consist of the Cieneba Series. The Cieneba Series occurs in mountainous uplands with altitudes ranging from 500 to 3000 feet. These soils consists of excessively drained, very shallow to shallow coarse sandy loams that formed in place from material weathered from

granitic rock (USDA 1973). Within the project area, the Cieneba soil type is a very rocky coarse sandy loam with 30 to 75 percent slopes. Rock outcrops occur on about 20 percent of the surface with very large granodioritic boulders on about 30 percent. The soil ranges from 5 to 15 inches in depth above a hard granodiorite subsurface making water runoff very rapid with a high erosion hazard (USDA 1973).

The climate of the region can generally be described as Mediterranean, with cool wet winters and hot dry summers. Rainfall limits vegetation growth. Habitat types adapted to the dry conditions of the region occur in the project area. The project area is dominated by coastal sage scrub on the western side of the project and mixed chaparral in the higher areas on the eastern side of the project. Components of these communities provided important resources to Native Americans in the region. Sage seed, yucca, buckwheat, acorns, and native grasses formed important food resources to Late Prehistoric Native Americans.

Animal resources in the region include deer, fox, raccoon, skunk, bobcats, coyotes, rabbits, and various rodent, reptile, and bird species. Small game, dominated by rabbits, is relatively abundant.

1.2.2 Cultural Setting

Prehistoric Period

Paleoindian Period

The earliest well documented prehistoric sites in southern California are identified as belonging to the Paleoindian period, which has locally been termed the San Dieguito complex/tradition. The Paleoindian period is thought to have occurred between 9,000 years ago, or earlier, and 8,000 years ago in this region. Although varying from the well-defined fluted point complexes such as Clovis, the San Dieguito complex is still seen as a hunting focused economy with limited use of seed grinding technology. The economy is generally seen to focus on highly ranked resources such as large mammals and relatively high mobility which may be related to following large game. Archaeological evidence associated with this period has been found around inland dry lakes, on old terrace deposits of the California desert, and also near the coast where it was first documented at the Harris Site.

Early Archaic Period

Native Americans during the Archaic period had a generalized economy that focused on hunting and gathering. In many parts of North America, Native Americans chose to replace this economy with types based on horticulture and agriculture. Coastal southern California economies remained largely based on wild resource use until European contact (Willey and Phillips 1958). Changes in hunting technology and other important elements of material culture have created two distinct subdivisions within the Archaic period in southern California.

The Early Archaic period is differentiated from the earlier Paleoindian period by a shift to a more

generalized economy and an increased focus on the use of grinding and seed processing technology. At sites dated between approximately 8,000 and 1,500 years before present, the increased use of groundstone artifacts and atlatl dart points, along with a mixed core-based tool assemblage, identify a range of adaptations to a more diversified set of plant and animal resources. Variations of the Pinto and Elko series projectile points, large bifaces, manos and portable metates, core tools, and heavy use of marine invertebrates in coastal areas are characteristic of this period, but many coastal sites show limited use of diagnostic atlatl points. Major changes in technology within this relatively long chronological unit appear limited. Several scientists have considered changes in projectile point styles and artifact frequencies within the Early Archaic period to be indicative of population movements or units of cultural change (Moratto 1984), but these units are poorly defined locally due to poor site preservation.

Late Prehistoric Period

Around 2,000 B.P., Yuman-speaking people from the eastern Colorado River region began migrating into southern California, representing what is called the Late Prehistoric Period. The Late Prehistoric Period in San Diego County is recognized archaeologically by smaller projectile points, the replacement of flexed inhumations with cremation, the introduction of ceramics, and an emphasis on inland plant food collection and processing, especially acorns (True 1966). Inland semi-sedentary villages were established along major water courses, and montane areas were seasonally occupied to exploit acorns and piñon nuts, resulting in permanent milling features on bedrock outcrops. Mortars for acorn processing increased in frequency relative to seed grinding basins. This period is known archaeologically in southern San Diego County as the Yuman (Rogers 1945) or the Cuyamaca Complex (True 1970).

The Kumeyaay (formerly referred to as Diegueño) who inhabited the southern region of San Diego County, western and central Imperial County, and northern Baja California (Almstedt 1982; Gifford 1931; Hedges 1975; Luomala 1976; Shippek 1982; Spier 1923) are the direct descendants of the early Yuman hunter-gatherers. Kumeyaay territory encompassed a large and diverse environment which included marine, foothill, mountain, and desert resource zones. Their language is a dialect of the Yuman language which is related to the large Hokan super family.

There seems to have been considerable variability in the level of social organization and settlement variance. The Kumeyaay were organized by patrilineal, patrilocal lineages that claimed prescribed territories, but did not own the resources except for some minor plants and eagle aeries (Luomala 1976; Spier 1923). Some lineages occupied procurement ranges that required considerable residential mobility, such as those in the deserts (Hicks 1963). In the mountains, some of the larger groups occupied a few large residential bases that would be occupied biannually, such as those occupied in Cuyamaca in the summer and fall, and in Guatay or Descanso during the rest of the year (Almstedt 1982; Rensch 1975). According to Spier (1923), many Eastern Kumeyaay spent the period of time from spring through autumn in larger residential bases in the upland procurement ranges, and wintered in mixed groups in residential bases along the eastern foothills on the edge of the desert (i.e., Jacumba and Mountain Springs). This variability in settlement mobility and organization reflects the great range of environments in the territory.

Acorns were the single most important food source used by the Kumeyaay. Their villages were usually located near water, which was necessary for leaching acorn meal. Other storable resources such as mesquite or agave were equally valuable to groups inhabiting desert areas, at least during certain seasons (Hicks 1963; Shackley 1984). Seeds from grasses, manzanita, sage, sunflowers, lemonadeberry, chia and other plants were also used along with various wild greens and fruits. Deer, small game and birds were hunted and fish and marine foods were eaten. Houses were arranged in the village without apparent pattern. The houses in primary villages were conical structures covered with tule bundles, having excavated floors and central hearths. Houses constructed at the mountain camps generally lacked any excavation, probably due to the summer occupation. Other structures included sweathouses, ceremonial enclosures, ramadas and acorn granaries. The material culture included ceramic cooking and storage vessels, baskets, flaked lithic and ground stone tools, arrow shaft straighteners, stone, bone, and shell ornaments.

Hunting implements included the bow and arrow, curved throwing sticks, nets and snares. Shell and bone fishhooks, as well as nets, were used for fishing. Lithic materials including quartz and metavolcanics were commonly available throughout much of the Kumeyaay territory. Other lithic resources, such as obsidian, chert, chalcedony and steatite, occur in more localized areas and were acquired through direct procurement or exchange. Projectile points including the Cottonwood Series points and Desert Side-notched points were commonly produced.

Kumeyaay culture and society remained stable until the advent of missionization and displacement by Hispanic populations during the eighteenth century. The effects of missionization, along with the introduction of European diseases, greatly reduced the native population of southern California. By the early 1820s, California was under Mexico's rule. The establishment of ranchos under the Mexican land grant program further disrupted the way of life of the native inhabitants.

Ethnohistoric Period

The Ethnohistoric period refers to a brief period when Native American culture was initially being affected by Euroamerican culture and historical records on Native American activities were limited. When the Spanish colonists began to settle California, the project area was within the territory of a loosely integrated cultural group historically known as the Kumeyaay or Northern and Southern Diegueño because of their association with the San Diego Mission. The Kumeyaay as a whole speak a Yuman language which differentiates them from the Luiseño, who speak a Takic language to the north (Kroeber 1925). Both of these groups were hunter-gatherers with highly developed social systems. European contact introduced diseases that dramatically reduced the Native American population and helped to break down cultural institutions. The transition to a largely Euroamerican lifestyle occurred relatively rapidly in the nineteenth century.

Historic Period

Cultural activities within San Diego County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American control, occupation, and land use. An

abbreviated history of San Diego County is presented for the purpose of providing a background on the presence, chronological significance, and historical relationship of cultural resources within the county.

Native American control of the southern California region ended in the political views of western nations with Spanish colonization of the area beginning in 1769. De facto Native American control of the majority of the population of California did not end until several decades later. In southern California Euroamerican control was firmly established by the end of the Garra uprising in the early 1850s (Phillips 1975).

Spanish

The Spanish Period (1769-1821) represents a period of Euroamerican exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego and San Luis Rey Missions. The Mission system used Native Americans to build a footing for greater European settlement. The Mission system also introduced horses, cattle, other agricultural goods and implements; and provided construction methods and new architectural styles. The cultural and institutional systems established by the Spanish continued beyond the year 1821, when California came under Mexican rule.

Mexican

The Mexican Period (1821-1848) includes the retention of many Spanish institutions and laws. The mission system was secularized in 1834, which dispossessed many Native Americans and increased Mexican settlement. After secularization, large tracts of land were granted to individuals and families and the rancho system was established. Cattle ranching dominated other agricultural activities and the development of the hide and tallow trade with the United States increased during the early part of this period. The Pueblo of San Diego was established during this period and Native American influence and control greatly declined. The Mexican Period ended when Mexico ceded California to the United States after the Mexican-American War of 1846-48.

American

Soon after American control was established (1848-present), gold was discovered in California. The tremendous influx of American and Europeans that resulted quickly drowned out much of the Spanish and Mexican cultural influences and eliminated the last vestiges of de facto Native American control. Few Mexican ranchos remained intact because of land claim disputes and the homestead system increased American settlement beyond the coastal plain.

1.2.3 Record Search Results

The archaeological inventory includes archival and other background studies in addition to Laguna Mountain's field survey of the project area. The archival research consisted of literature and record searches at local archaeological repositories, in addition to an examination of historic maps, and historic site inventories. This information was used to identify previously recorded resources and determine the types of resources that might occur in the survey area. The methods and results of the archival research are described below.

The records and literature search for the project was conducted at the South Coastal Information Center at San Diego State University and the San Diego Museum of Man. The records search included a one-mile radius of the project area to provide background on the types of sites that would be expected in the region (Appendix B). Copies of historic maps were provided by the South Coastal Information Center.

Eleven documented archaeological investigations have taken place in the vicinity of the project (Table 1). Most of these have been survey projects related to residential development. These studies indicate there was a variety of prehistoric and historic activity throughout the area. Records searches at the South Coastal Information Center and the San Diego Museum of Man indicated that the project area had not been previously surveyed and no sites were identified within the current project area at that time.

Thirty-six archaeological sites have been identified through previous research within a one-mile radius of the project. Several of these sites are located near the southern edge of the project, indicating the potential for resources in the area. Table 2 provides a summary of the types of sites present in the area. Most of these sites are prehistoric and include bedrock milling stations and lithic scatters. This is a reflection of a large amount of prehistoric activity in the area. Four historic sites are also present in the area and include two structures and two trash scatters.

Historic research included an examination of a variety of resources. The current listings of the National Register of Historic Places were checked through the National Register of Historic Places website. The California Inventory of Historic Resources (State of California 1976) and the California Historical Landmarks (State of California 1992) were also checked for historic resources. Historic map research indicated that the project area does not contain historic resources although structures of historic age were present to the west.

Table 1. Cultural Resource Surveys Within a 1-Mile Radius of the Project

Author	Title	Date
Beddow	Negative Survey Report for John Borneman-Grading Permit	2001
Chace	An Archaeological Survey of the Abouajram Property near Ramona	1979
Chace	An Archaeological Survey of the Rodich Property near Ramona	1981
Chace and Yohe	An Archaeological Survey of TPM 19173	1988
Crafts	Negative Archaeological Survey Report	1986
Eidsness, Flower, Ike, and Roth	Archaeological Investigation of the Akre-Clawson-Hayes Project	1979
Norwood	Akre and Hayes Property: Cultural Resource Investigation in Ramona, CA	1978
Smith	An Archaeological Survey of the Taylor Lot Split	1989
Sutton	An Archaeological Survey of the McNulty Property near Ramona	1978
Wade	Jehovah's Witnesses Kingdom Hall: Preservation Plan/Archaeological Site Capping	1995
Wright	Cultural Resources Survey Report for TPM 20926	2005

Table 2. Cultural Resources Within a One-Mile Radius of the Project Area

Site Number	Site Type	Recorder
SDM-W-363	Bedrock Milling Feature	Hedges
SDM-W-1294A	Bedrock Milling Feature and Associated Groundstone, Ceramics, and Lithic Scatter	Fink and Hightower
SDM-W-1294B	Temporary Village	Banks
CA-SDI-5813 (SDM-W-6516)	Groundstone and Lithic Scatter	Sutton and Laylander
CA-SDI-5927 (SDM-W-1842)	Groundstone and Lithic Scatter	Norwood
CA-SDI-5928 (SDM-W-1841)	Historic Trash Dump Bedrock Milling Feature with Associated Groundstone and Lithic Scatter	Norwood
CA-SDI-6651 (SDM-W-1982)	Groundstone and Lithic Scatter	Eidsness
CA-SDI-6652 (SDM-W-1983)	Bedrock Milling Feature with Associated Groundstone and Lithic Scatter	Eidsness
CA-SDI-6653 (SDM-W-1984)	Bedrock Milling Feature	Eidsness
CA-SDI-6654 (SDM-W-1985)	Bedrock Milling Feature with Associated Lithic Scatter	Eidsness
CA-SDI-6655 (SDM-W-1986)	Bedrock Milling Feature	Eidsness
CA-SDI-6686 (SDM-W-5512)	Bedrock Milling Feature	Chace
CA-SDI-6687 (SDM-W-5513)	Bedrock Milling Feature	Chace
CA-SDI-6688 (SDM-W-5514)	Bedrock Milling Feature	Chace
CA-SDI-6689 (SDM-W-5515)	Prehistoric Settlement	Chace and Knutson
CA-SDI-7196/CA-SDI-9909 (SDM-W-2197/SDM-W-5521)	Bedrock Milling Feature with Associated Groundstone, Ceramics, and Lithic Scatter	Rhodes; Cook; Wade
CA-SDI-8662A (SDM-W-5516A)	Prehistoric Settlement	Chace
CA-SDI-8662B (SDM-W-5516B)	Bedrock Milling Feature	Chace
CA-SDI-8662C (SDM-W-5516C)	Bedrock Milling Feature	Chace
CA-SDI-8662C (SDM-W-5516D)	Bedrock Milling Feature	Chace
CA-SDI-8662E (SDM-W-5516E)	Bedrock Milling Feature	Chace
CA-SDI-9909	Bedrock Milling Feature with Associated Groundstone, Ceramics, and Lithic Scatter	Cook
CA-SDI-9910 (SDM-W-5522)	Bedrock Milling Feature with Associated Groundstone, Ceramics, and Lithic Scatter	Cook
CA-SDI-9911	Bedrock Milling Feature	Cook

**Table 2. Cultural Resources Within a One-Mile Radius of the Project Area
(Continued)**

Site Number	Site Type	Recorder
CA-SDI-9912 (SDM-W-5524)	Bedrock Milling Feature with Associated Ceramics and Lithic Scatter	Cook
CA-SDI-11163	Bedrock Milling Feature	Colombo and Willis
CA-SDI-11242	Lithic Scatter	Corum, Colombo, Willis
CA-SDI-13175	Bedrock Milling Feature with Associated Groundstone, Ceramics, and Lithic Scatter	Smith
CA-SDI-13176	Historic Scatter	Smith
CA-SDI-13177	Bedrock Milling Feature with Associated Groundstone and Lithic Scatter	Smith
CA-SDI-13178	Bedrock Milling Feature with Associated Groundstone, Ceramics, and Lithic Scatter	Smith
CA-SDI-13858 (SDM-W-6346)	Lithic Scatter	Wade
CA-SDI-14264	Bedrock Milling Feature	Dominici
CA-SDI-14265	Rockshelter and Bedrock Milling Feature with Associated Ceramics and Lithic Scatter	Dominici
P-37-013868 (SDM-W-6347)	Historic Structure	Wade
P-37-024346	Historic Bridge	Pursell

1.3 Applicable Regulations

Resource importance is assigned to districts, sites, buildings, structure, and objects that possess exceptional value or qualify illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined in CEQA and the San Diego County Local Register provide the guidance for making such a determination. The following sections(s) details the criteria that a resource must meet in order to be determined important.

1.3.1 California Environmental Quality Act (CEQA)

According to CEQA (§15064.5a), the term “historical resource” includes the following:

- (1) A resource listed in, or determine to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).

- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resources as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:
 - (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - (B) Is associated with the lives of person important in our past;
 - (C) Embodies the distinctive characteristics of a type, period, region, or individual, or possesses high artistic value; or
 - (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined eligible for listing the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in sections 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as:

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
 - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

- (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historical or culturally significant; or
- (C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- (1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.a of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 1564.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

- (d) When an initial study identifies the existence of, or the probably likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code SS5097398. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with

Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
- (2) The requirement of CEQA and the Coastal Act.

1.3.2 San Diego County Local Register of Historical Resources (Local Register)

The County requires that resource importance be assessed not only at the State level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource.

- (1) Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
- (2) Is associated with the lives of persons important to the history of San Diego County or its communities;
- (3) Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

1.3.3 San Diego County Resource Protection Ordinance (RPO)

The County of San Diego's RPO protects significant cultural resource. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

Sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance.

Such locations shall include, but not be limited to:

- (1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
 - (aa) Formally determined eligible or listed in the National Register of Historic Placed by the Keeper of the National Register; or
 - (bb) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or

- (2) One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials; and
- (3) Any location of past or current sacred religious or ceremonial observances which is either:
 - (aa) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or,
 - (bb) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. This includes development, trenching, grading, clearing and grubbing, or any other activity or use damaging to significant prehistoric or historic lands. The only exempt activity is scientific investigation with an approved research design prepared by an archaeologist certified by the Society of Professional Archaeologists. All discretionary projects are required to be in conformance with applicable County Standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with County standards.

2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

Determining resource importance is a two-step process. First, the cultural environment must be defined. Then the criteria for determining importance must be applied to the resource. The following subchapters provide guidance on this process and detail the cultural environment and criteria that is typically used in evaluating resources.

2.1 Defining The Cultural Environment

San Diego County has more than 23,000 recorded sites as of September 2006 and this number continues to grow. The cultural environment consists of the remains of prehistoric and historic human behaviors. When cultural resources have been identified, the cultural environment has been defined and the baseline condition set. Cultural resources include archaeological and historic sites, structures, and objects, as well as traditional cultural properties. The following is a list of components that can make up the cultural environment.

2.1.1 Building

A building is a resource, such as a house, barn, church, factory, hotel, or similar structure created principally to shelter or assist in carrying out any form of human activity. “Building” may also be used to refer to a historically and functionally related unit, such as a courthouse and jail or a house and barn. The Somers-Linden Farmstead (Victorian), the McRae/Albright Ranch House (Victorian), the Holmgren House (Moderne), and the County Administration Center (Spanish Colonial Revival) are examples of buildings in the County of San Diego.

Special consideration should be given to moved buildings, structures, or objects, cultural resources achieving significance within the past fifty (50) years, and reconstructed buildings. Context, time, and original form are integral to historic preservation. However, it is important to recognize resources outside of the required characteristics for the history that they embody.

Moved buildings, structures, or objects

The retention of historical resources on site should be encouraged and the non-historic grouping of historic buildings into parks or districts would be discouraged. However, it is recognized that moving an historic building, structure, or object is sometimes necessary to prevent its destruction, and is appropriate in some instances. An historical resource should retain its historic features and compatibility in orientation, setting, and general environment.

Cultural resources achieving significance within the past fifty (50) years

In order to understand the historical importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource

less than fifty (50) years old may be considered if it can be determined that sufficient time has passed to understand its historical importance.

Reconstructed Buildings

A reconstructed building less than fifty (50) years old may be eligible if it embodies traditional building methods and techniques that play an important role in a community's historically rooted beliefs, customs, and practices. An example of a reconstructed building is an American Indian sweat lodge.

2.1.2 Site

A site is the location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possessed historical, cultural, or archaeological value regardless of the value of any existing building, structure, or object. A site need not be marked by physical remains if it is the location of a prehistoric or historic event, and if no buildings, structures, or objects marked it at that time. Examples of such sites are trails, designed and traditional landscapes, battlefields (San Pasqual Battlefield), homestead sites, habitation sites (Village of Pamo), American Indian ceremonial areas (Gregory Mountain), petroglyphs, pictographs, and traditional cultural places.

2.1.3 Structure

The term "structure" is used to describe a construction made for a functional purpose rather than creating human shelter. Examples of structures include mines, flumes, roads, bridges, dams, and tunnels.

2.1.4 Object

The term "object" is used to describe those constructions that are primarily artistic in nature or are relatively small in scale and simply constructed, as opposed to a building or structure. Although it may be moveable by nature or design, an object is associated with a specific setting or environment. Objects should be in a setting appropriate to their significant historic use, role, or character. Objects that are relocated to a museum are not eligible for listing in the Local Register. Examples of objects include fountains, monuments, maritime resources, sculptures, and boundary markers.

2.1.5 Landscapes and Traditional Cultural Properties

"Landscapes" vary in size from small gardens to national parks. In character, they range from designed to vernacular, rural to urban, and agricultural to industrial. A cultural landscape is a geographic area which, because of a unique and integral relationship between the natural and cultural environments, has been used by people; shaped or modified by human activity, occupation or invention; or is infused with significant value in the belief system of a culture or society. Estate gardens, cemeteries, farms, quarries, mills, nuclear test sites, suburbs, and abandoned settlements, and prehistoric complexes, all may be considered under the broad category of cultural landscapes.

Landscapes provide a distinct sense of time and place. Traditional cultural landscapes (Traditional Cultural Properties) can also consist of related archaeological and ethnographic features and places (see below for definition of a prehistoric district).

2.1.6 Prehistoric and Historic Districts

Districts are united geographic entities that contain a concentration of historic buildings, structures, objects, and/or sites united historically, culturally, or architecturally. Districts are defined by precise geographic boundaries; therefore, districts with unusual boundaries require a description of what lies immediately outside the area, in order to define the edge of the district and to explain the exclusion of adjoining areas. Camp Lockett in Campo is an example of a historic district. The Village of Pamo is an example of a prehistoric Indian rancheria that represents a traditional cultural landscape that could be a district, consisting of the places used and inhabited by a traditional culture. A traditional cultural landscape defined as a district could include a village site, related milling features, stone quarries and lithic tool process areas, ceremonial locations and landmarks, and temporary or seasonal camps. Together, these represent a traditional cultural landscape.

2.2 Criteria for the Determination of Resource Importance

A number of criteria are used in identifying significant historic/archaeological resources and are based upon the criteria for inclusion in the San Diego County Local Register. Significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture.

The San Diego County Register was modeled after the California Register. As such, a cultural resource is determined significant if the resource is listed in, or determined to be eligible for listing in the National Register of Historic Places, the California Register of Historical Resources, or the San Diego County Register of Historical Resources. Any resource that is significant at the National or State level is by definition significant at the local level.

The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources; or is not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or is not identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that a resource may be historical as defined in Public Resources Code section 5020.1(j) or 5024.1.

The following criteria must be considered when evaluating a resource's importance. The first four criteria were derived from the significance criteria found in the California Environmental Quality Act (CEQA) and the San Diego County Register of Historical Resources (Ordinance No.9493; San Diego County Administrative Code §396.7). The San Diego County Register is similar to both the National Register and California Register but is different in that significance is evaluated at the local level.

1. Resources associated with events that have made a significant contribution to the broad patterns of California or San Diego County's history and cultural heritage. Examples include resources associated with the Battle of San Pasqual (Mexican-American War, 1846) or gold mining in the Julian area (1870s), or a Kumeyaay settlement in the Cuyamaca Valley. Each of these resources would be considered significant because it is associated with an event that has made a significant contribution to the broad patterns of San Diego County's history and cultural heritage.
2. Resources associated with the lives of persons important to our past, including the history of San Diego County or its communities. Resources that are associated with the life of George W. Marston (Benefactor/Merchant/Civic Leader), Kate Sessions (Horticulturalist), John D. Spreckels (Investor/Developer), Ellen Browning Scripps (Philanthropist), Ah Quin (Chinese Merchant/Labor Contractor), Manuel O. Medina (Pioneer of the Tuna Industry), Jose Manuel Polton (Hatam [Kumeyaay Captain of the Florida Canyon Village]), or Jose Pedro Panto (Kumeyaay Captain of the San Pasqual Pueblo) illustrates this criteria because this list identifies examples of individuals that are important to the history of San Diego County or its communities.
3. Resources that embody the distinctive characteristics of a type, period, region (San Diego County), or method of construction, or represents the work of an important creative individual, or possesses high artistic values. Resources representing the work of William Templeton Johnson (Architect – Balboa Park, Serra Museum), Irving Gill (Architect – Bishop's School), Lilian Rice (Rancho Santa Fe), or Hazel Waterman (Designer – Estudillo Adobe Restoration) would be considered significant because they represent the work of an important creative individual; or if a resource is identified as a Queen Anne, Mission Revival, Craftsman, Spanish Colonial, or Western Ranch Style structure, it would be significant because it embodies the distinctive characteristics of a type or period.
4. Resources that have yielded or may be likely to yield, information important in prehistory or history. Most archaeological resources contain information; however the amount of information varies from resource to resource. For example, a small lithic scatter will contain information, but it will be on a much more limited basis than that of a village or camp site. The information may be captured during initial recordation and testing of the site or may require a full data recovery program or additional treatment/mitigation. **Any site that yields information or has the potential to yield information is considered a significant site.** Most resources will be considered significant because they contain some information that contributes to our knowledge of history or prehistory. The criteria used to evaluate a single resource is the same criteria used to evaluate cumulative impacts to multiple resources outside the boundary of a project.
5. Although districts typically will fall into one of the above four categories, because they are not specifically identified, the following criterion is included which was obtained from the National Register:

Districts are significant resources if they are composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition, but collectively compose an entity of exceptional historical or artistic significance, or outstandingly commemorate or illustrate a way of life or culture. A traditional cultural landscape is an example of a prehistoric district because individual sites must be considered within the broader context of their association with one another.

6. Resource Protection Ordinance. Cultural resources must be evaluated for both the California Environmental Quality Act as outlined in criteria 1-4 above and the Resource Protection Ordinance pursuant to Article III of the ordinance. Under the Resource Protection Ordinance, cultural resources are considered “RPO” significant if they meet the definition of a RPO "Significant Prehistoric or Historic Site", as set forth in Section 3.1 above.
7. Human remains are considered “highly sensitive” by the County. As such, human remains require special consideration and treatment. Regulations require that if human remains are discovered, the County Coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted in order to determine proper treatment and disposition of the remains. The following criterion was included pursuant to the California Environmental Quality Act (§15064.5) and California State Code (PRC5097.98 and HSC7050.5). As such, a resource shall be considered significant if it contains any human remains interred outside of a formal cemetery. Mitigation measures will be developed on a case by case basis by the County archaeologist and the archaeological consultant. In addition, it is of the utmost importance to tribes that human remains be avoided whenever feasible.
8. Integrity is the authenticity of a resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. The evaluation of integrity is somewhat of a subjective judgment, but it must always be grounded in an understanding of a property’s physical features and how they relate to its historical associations or attributes and context. Resources must retain enough of their historical character or appearance to be recognizable as historical resources and to convey the reasons for their significance. An evaluation of integrity is an essential part of determining significance for historical resources such as building, structures, and districts.

Integrity is evaluated through the assessment of a cultural resource’s attributes, and may include location, design, setting, materials, workmanship, feeling, and association. It must be judged with reference to the particular criteria under which a resource is proposed for eligibility (structural, architectural, artistic, historic location, archaeological site, historic district). Alterations over time to a resource or historic changes in its use may themselves have historical, cultural, or architectural significance.

Attributes - Attributes are those distinctive features that characterize a resource. They should be evaluated and compared to other properties of its type, period, or method of construction.

Location - Location is the place where the property was constructed or the place where the historical event occurred. The actual location of an historical property, complemented by its setting, is particularly important in recapturing the sense of historical events and persons.

Design - Design is the combination of elements that create the historical form, plan, space, structure, and style of a property. This includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials. Design can also apply to districts and to the historical way in which the buildings, sites, or structures are related. Examples include spatial relationships between major features; visual rhythms in a streetscape or landscape plantings; the layout and materials of walkways and roads; and the relationship of other features, such as statues, water fountains, and archaeological sites.

Setting - Setting is the physical environment of an historical property. It refers to the historical character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its historical relationship to surrounding features and open space. The physical features that constitute the historical setting of an historical property can be either natural or manmade and include such elements as topographical features, vegetation, simple manmade paths or fences and the relationships between buildings and other features or open spaces.

Materials - Materials are the physical elements that were present during the development period and are still present or, if materials have been replaced, the replacement(s) must have been based on the original. The property must be an actual historical resource, not a recreation. For example, a Victorian style wood-frame dwelling that has been covered with reconstructed stucco has lost its integrity of materials. Conversely, an adobe wall that has been reconstructed with similar adobe mud, as opposed to adobe-simulate concrete, would retain its integrity of materials.

Workmanship - Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history. It is the evidence of the artisans' labor and skill in constructing or altering a building, structure, object, or site. It may be expressed in vernacular methods of construction and plain finishes or in highly sophisticated configurations and ornamental detailing. Examples of workmanship in historic buildings include tooling, carving, painting, graining, turning, and joinery. Examples of workmanship in precontact contexts include pottery, stone tools, basketry, rock art, bedrock milling, and stone structures

To assess integrity one must:

- (1) Define essential physical features that must be present to a high degree for a property to represent its significance;

- (2) Determine whether the essential physical features are apparent enough to convey the property's significance; and
- (3) Compare the property with similar properties in the locally significant theme.

A property that is significant for its historical association should retain the essential physical features that made up its character or appearance during the period of its association with the important event, historical pattern, or person(s). If the property is a site where there are no material cultural remains, such as a battlefield, the setting must be intact. If the historical building associated with the event, pattern, or person no longer exists, the property has lost its historical integrity.

A property important for illustrating a particular architectural style or construction technique must retain the physical features that constitute that style or technique. A property that has lost some historical materials or details can be considered if it retains the majority of the features that illustrate its style in terms of the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. A property should not be considered if it retains some basic features conveying massing, but has lost the majority of the features that once characterized its style. Normally changes to a structure that are reversible will not affect integrity because they will be less than significant.

Properties being considered for the first five criteria above must not only retain the essential physical features, but the features must be visible enough to convey their significance and historical identity. This means that even if a property is physically intact, its integrity is questionable if its significant features are concealed under modern construction. Archaeological properties are the exception to this – by nature they may not require visible features to convey their significance.

Note: Unless a resource is determined to be “not significant” based on the above criteria, it will be considered a significant resource. If it is agreed to forego significance testing on cultural sites, the sites will be treated as significant resources and must be preserved through project design. In addition, a treatment plan must be prepared that will include preservation of cultural resources.

3.0 RESEARCH DESIGN

The goal of the testing program was to assess the potential effects of the project on sites CA-SDI-18321 and CA-SDI-18322. To accomplish this goal, background information was examined and assessed, and a testing program was conducted to identify the extent and integrity of the sites.

3.1 Integrity

Resource integrity is a critical part of evaluation. For archaeological purposes, integrity usually refers to the preservation of artifact associations and stratigraphy. Bioturbation and other natural factors affecting artifact associations are common in the San Diego region, and much of the region area has also been affected by agriculture and urban development.

3.2 Native American Heritage Concerns

Native American heritage concerns need to be included in significance evaluations as part of State and County policy. Native American concerns particularly focus on religious sites, sites that contain human remains, and sites with items used for religious purposes.

3.3 Research Potential

Research potential is the most applicable of the California Register criteria for archaeological resources. To establish a framework to evaluate if a sites may be likely to yield information important in prehistory or history, important research questions are established along with data needs. These research criteria are established below.

3.4 Theoretical Orientation

As a social science, archaeology seeks to understand human behavior. Because of the nature of the archaeological record, archaeologists look at behavior in terms of cultural patterns, and environmentally oriented archaeologists attempt to explain these patterns in the context of various and changing natural and social environments. While much of the past archaeological research in San Diego County has focused on reconstructing culture change over time or “culture history,” new theoretical ideas in the 1960s and 1970s highlighted the importance of the environment and shifted the emphasis of archaeology from reconstructing history to understanding culture (Binford 1989).

The fundamental theoretical orientation that underlies this study, and much of the work that has been conducted in San Diego County to date, is cultural materialism. “Cultural materialism” as used here essentially holds that practical, survival, and economic aspects of culture ultimately determine the success or the spread of specific behavior patterns (Hayden 1993). Cultural ecology and environmental archaeology are forms of cultural materialism, emphasizing the role of the environment as a practical controlling factor on culture and human behavior. The perspectives of cultural materialism and cultural ecology are appropriate for the study area because of the direct

relationship between hunter-gatherer economy and the environment and because these concepts represent a continuation of recent thinking in the region. Cultural materialism is also appropriate for study of the historical archaeological resources because it focuses on relationships within systems.

3.5 Research Topics, Implications, and Data Requirements

3.5.1 Prehistoric Subsistence

Reconstructing the subsistence economy of prehistoric hunter-gatherers is a key question for cultural ecology. Historic period hunter-gatherers typically occupied extreme environments and/or had been heavily impacted by European colonial expansion. As a consequence, understanding the cultural adaptations of hunter-gatherers in more productive environments is heavily reliant on archaeological data.

For the most part, subsistence during the Late Prehistoric in San Diego County is fairly well understood through the ethnographic record. Ethnographic information has provided a level of detail beyond the archaeological record, but certain aspects are poorly known.

Based on the presence of bedrock milling features at sites CA-SDI-18321 and CA-SDI-18322, it is likely that subsistence was focused on inland terrestrial resources. These sites are located well beyond the ten kilometer coastal foraging radius suggested by Jones (1992).

- How does site subsistence pattern relate to resource availability?

Hypothesis: The general pattern is one of using available resources: Acorn processing subsistence technologies and small mammal procurement should dominate the assemblage. Marine resources, if present, will represent a minimal component of the assemblage.

Data Needs:

- Stratigraphic contexts that indicate the sites contain interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.
- Material suitable for establishing chronology from these contexts.
- Vertebrate and invertebrate faunal material, along with tools that reflect subsistence focus and activities such as projectile points, bifaces, and milling tools.
- Sufficient quantities of ecofactual material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m³ are required.

3.5.2 Prehistoric Chronology

Chronology and aspects of culture history have long been the subjects of archaeological research in the San Diego region. Late Prehistoric period sites are common in the region, and are relatively easily identified through the presence of bedrock milling, ceramics, and bow and arrow technology. Early Archaic period sites are more difficult to recognize and perhaps less common in the area. Furthermore, while Archaic period sites have been scrutinized in coastal regions, few have been studied in depth in inland areas.

- Are the Archaic and Paleoindian periods represented at sites CA-SDI-18321 and CA-SDI-18322 and if so, how do these components compare to Late Prehistoric assemblages at the same location?

Hypothesis: Due to the bedrock milling associated with both prehistoric sites, it is unlikely that these sites represent Paleoindian occupation. If present, Archaic Period evidence will be represented by dart points, differences in lithic material selection and reduction technology, and flaked lithic tool types.

Data Needs:

- Stratigraphic contexts that indicate the sites contain interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.
- Material suitable for radiocarbon dating from these contexts.
- Biface tools and artifacts representative of activities carried out at the site. To obtain a statistically valid sample, quantities of 50 items per m³ are required.

3.5.3 Prehistoric Mobility and Exchange

Settlement Patterns have been the subject of considerable research in San Diego County. This topic contributes to the definition of settlement systems and the study of their change through time, both elements important to local prehistoric studies. The interaction of cultural groups and the natural landscape is an important aspect of human behavior. Just as cultural geographers study current land use patterns to aid in urban planning, the study of prehistoric settlement patterns can provide insight into past strategies of interaction with the environment.

Most settlement pattern studies focus on the relationship between natural resources and areas of human occupation. A general assumption is that important resources for subsistence create a draw for settlement, and that people will tend to locate near important water and food resources. Other types of sites may also be located near resources, but may not be related to habitation. These special task sites, such as isolated bedrock milling stations and lithic procurement/reduction areas, also provide important evidence on how people used the natural landscape.

An examination of resources used at a site and their source provenience is a means of examining mobility. Direct procurement, or travel over relatively large distances to procure resources is one aspect of mobility. Another aspect relates to territoriality. A seasonal round type of mobility strategy with bipolar village locations is often the model for Late Prehistoric mobility.

- How do CA-SDI-18321 and CA-SDI-18322 fit into the regional settlement system through time?

Hypothesis: Site patterning in relation to water, land-form, and lithic resources is expected. Exchange played a very minor role in resource procurement and, although mobility provided a range of available resources at different time intervals, the sites reflect foraging and processing behavior and the local resources of the area. Roughly 90% of the assemblage will represent local materials within a 10-km foraging radius.

Data Needs:

- Stratigraphic contexts that indicate the sites contain interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.
- Material suitable for chronological control from these contexts.
- Artifacts representative of activities carried out at the sites. To obtain a statistically valid sample, quantities of 50 items per m³ are probably required.
- Sufficient quantities of source specific lithic material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m³ are required.

4.0 ANALYSIS OF PROJECT EFFECTS

The goal of this study is to identify any cultural resources located within the project area so that the effects of the project could be assessed. To accomplish this goal, background information was examined and assessed, and a field survey was conducted to identify cultural remains. Based on the records search and historic map check, most of the cultural resources within the project are likely to be prehistoric resources. Prehistoric cultural resources could include bedrock milling associated with the bedrock outcrops and oak resources in the area or other evidence of Native American activity.

The records and literature search for the project was conducted at the South Coastal Information Center of the California Archaeological Inventory at San Diego State University and the San Diego Museum of Man. This records search included site records and reports for the project area and a one mile radius of the project along with information on potential historic resources.

In addition to the background research and survey, a testing program was conducted to help evaluate the extent of cultural resources within the project area and recover some of the data from these resources. The methods and results of these studies are described below.

4.1 Methods

4.1.1 Survey Methods

The survey of the project area was conducted on February 15, 2007 by Mr. Andrew R. Pignuolo, RPA. The majority of the project area was surveyed on foot in 10 to 15 meter transect intervals. The project included steep slopes and dense chaparral. These acted as a constraint to survey and steep slopes with dense vegetation were surveyed at 20-30 m intervals. Figure 4 provides a map showing the use of different survey methodology. Surface visibility was approximately 60% over most of the property, with the densest areas of vegetation occurring on the western slopes. Major bedrock outcrops were thoroughly checked for milling, but the majority of the outcrops were very irregular and generally not suitable for milling surfaces. Rodent burrows and open shrub understory provided surface visibility enabling the survey to adequately identify cultural resources.

Cultural resources identified during the survey were recorded on State of California, Department of Parks and Recreation forms and are included in Appendix F. Photographs and project records for this inventory will be temporarily curated at Laguna Mountain until final curation arrangements can be made at the San Diego Archaeological Center or another appropriate regional repository

4.1.2 Testing Methods

The goal of the testing and evaluation program was to assess the integrity and content of the two prehistoric sites (CA-SDI-18321 and CA-SDI-13822). Testing at CA-SDI-18321 and CA-SDI-13822 included mapping, bedrock milling recordation, surface collection of artifacts, and subsurface excavation to determine if a subsurface component is present. Test units were excavated to assess the integrity and content of the subsurface deposit.

The testing program was conducted between June 12 and June 25, 2007 by Mr. Andrew R. Pignuolo, RPA, Ms. Elizabeth Davidson, Mr. Jose “Pepe” Aguilar, Ms. Heather Thomson, and Ms. Julie Roy. Mr. Gabriel Kitchen and Mr. Clinton Linton of Red Tail Monitoring & Research, Inc. served as Native American monitors. During the inventory phase, the sites were initially surveyed using 10-15m parallel transects. The testing and evaluation phase began with a resurvey of the site area using 2-3 m interval parallel transects. This resulted in the identification and marking of surface artifacts and features from the site areas with pinflags. The sites were mapped using a Trimble GeoXT GPS with sub-meter accuracy. Each artifact received a consecutive surface shot number, except in the case where multiple items were within 15 cm of each other, these were collected together as one surface shot. All surface artifacts were bagged and marked with a surface collection numbers and provenience coordinates.

All site records were updated with the testing results on State of California, Department of Parks and Recreation forms. These forms are included in Appendix F. Photographs, artifacts, and project records for the testing program will be temporarily curated at Laguna Mountain until final curation arrangements can be made at the San Diego Archaeological Center or another appropriate regional repository.

Bedrock milling features were mapped drawn and measured during the recordation process. A State of California, Department of Parks and Recreation form was filled out for each feature and all milling elements were measured and described. Bedrock milling forms are included with the site form updates in Appendix F.

A total of 39 shovel test pits (STPs) were excavated at the two sites (CA-SDI-18321 and CA-SDI-18322) to determine if subsurface deposits were present and to establish the boundaries of each site. STPs were set out in cardinal directions across the site area. STPs were manually excavated circular test pits measuring 30 cm in diameter. STPs were excavated in 10 cm arbitrary, contour levels. The goal of STP placement was to test the areas within the site most likely to contain subsurface artifacts. All excavated soil was passed through 1/8-inch mesh hardware cloth and dry-screened in the field. Artifacts were removed from the screens and bagged by level.

The STP data indicated the presence of subsurface deposits at Loci A and B of site CA-SDI-18321 and site CA-SDI-18322. A test unit was placed in each of these areas to better assess the integrity and content of the subsurface components. The one meter square excavation units were placed in areas where the greatest subsurface deposits were identified. The units were excavated in 10 cm arbitrary contour levels, and provenience within each level was maintained. The unit datum was established in the high corner of each unit, and the levels were measured in contour levels using a line-level and tape measure from the datum. The unit was excavated until bedrock was exposed in the entire unit floor.

All excavated soil was passed through 1/8-inch mesh hardware cloth and dry-screened in the field. Artifacts were removed from the screens and bagged by level. Unit level sheets summarizing results and observations were completed following the excavation of each 10 cm level. This information included the type of cultural material recovered, soil conditions, and any noted disturbance. Cultural material was separated into prehistoric artifact and ecofact categories, bagged and labeled by 10 cm level, and taken to the laboratory for cleaning, analysis, and temporary curation.

A photographic record was kept to document the progress of the testing program. This included general overviews, and views of site excavation, and milling features. Digital photographs were taken during the entire testing program. A photographic log was kept to document orientation and subject matter. Photographic logs are included in Appendix D.

4.1.3 Laboratory and Cataloging Procedures

Laboratory work for the material was conducted by Ms. Elizabeth Davidson. All items other than tools were cleaned with a brush and water while the tools were only dry brushed. The material was then separated by material class within each level prior to cataloging.

Each artifact or group of artifacts was counted, weighed and/or measured and given consecutive catalog numbers, which were either marked directly on the artifact or on the container or bag. Each item was analyzed for specific attributes particular to that material class. The catalogue for the cultural material recovered is included in Appendix C.

4.1.4 Curation

Artifacts, photographs, and project records for this inventory and testing program will be temporarily curated at Laguna Mountain until final curation arrangements can be made at the San Diego Archaeological Center or another appropriate regional repository.

4.1.5 Native American Participation/Consultation

The County of San Diego conducted a Sacred Lands Check with the Native American Heritage Commission during the survey phase of the project (Appendix B). No resources were identified within the project area. Native American involvement in the project also included the participation

of Native American monitors during the testing phase. Red-Tail Monitoring and Research, Inc. provided Mr. Clinton Linton and Mr. Gabriel Kitchen as Native American Monitors/observers during the testing of prehistoric resources. Their comments and recommendations on the testing program are included in Appendix B.

4.2 SURVEY RESULTS

Two archaeological sites , CA-SDI-18321 and CA-SDI-18322, were identified within the project area along with three isolated artifacts , P-37-028204, P-37-028205, and P-37-028206 (Figure 4, Table 3). Site CA-SDI-18321 consists of a Late Prehistoric temporary camp with four loci at the head of a drainage. Site CA-SDI-18322 was probably a larger site, but has been heavily impacted by grading and only a large bedrock milling feature and associated cultural material remain. Isolate P-37-028204 consists of two Santiago Peak Volcanic bifacial thinning flakes. P-37-028205 is a single Tizon Brown Ware sherds and P-37-028206 is a shell button. Each of these resources is described in greater detail below.

Table 3. Summary of Cultural Resource Results

Resource Number	Type	Features	Artifacts	Size
CA-SDI-18321	Temporary Camp	Bedrock milling features, possible hearth feature	120 debitage, 1 obsidian debitage, 30 Tizon Brown Ware sherds, 1 mano, 1 pestle, 2 animal bone fragments, 15 fire-affected rocks	120 x 120 m
CA-SDI-18322	Bedrock Milling Station	1 bedrock milling feature	2 mano fragments and 5+ Fire-affected rock fragments	15 x 15 m
P-37-028204	Isolate	None	2 Bifacial Thinning flakes	-
P-37-028205	Isolate	None	1 Tizon Brown Ware Sherd	-
P-37-028206	Isolate	None	1 Shell Button	-

Figure 4

Project Location and Associated Cultural Resources

(Confidential located in Appendix G)

4.2.1 CA-SD-18321 (NM-S-1)

This site includes four loci (A-D) of prehistoric cultural material on ridgelines at the head of a seasonal drainage. It appears to represent a series of Late Prehistoric temporary camps associated with the drainage. The drainage encounters a large series of granitic outcrops before dropping below the site and it is likely that the rock acted as a natural dam for the drainage in this area creating a more reliable source of freshwater. The site is approximately 200 m northeast of an existing residence and graded pad. A dirt road passes along the northwestern corner of the site and other impacts related to percolation testing and brushing are present. The overall site is approximately 120 by 120 m in size. It contains numerous bedrock milling features. Cultural material includes at least 120 debitage fragments, 1 obsidian angular waste fragment, 30 Tizon Brown Ware sherds, 1 mano, 1 pestle, 2 animal bone fragments, and 15 fire-affected rocks.

Locus A appears to be the most intensively utilized area of the site and area least impacted by percolation testing and brushing. It is located on a small ridge on the north side of the drainage. The locus includes at least 1 granitic shouldered mano, 100+ fragments of debitage dominated by clear and milky quartz, 1 porphyritic volcanic flake from the Ballena gravels, 20 + Tizon Brown Ware pottery sherds, 2 fragments of animal bone, and 5+ fire-affected rock fragments. The locus also includes three bedrock milling features. Feature A is a large boulder with at least three shallow basins and one slick, Feature B also includes at least three shallow basins, Feature C includes a deep, but weathered mortar. Locus A is approximately 100 m north/south by 80 m east/west in size and an associated subsurface deposit is very likely. The integrity of this locus is very good. Percolation testing is limited to the area north of this locus.

Locus B is located on a higher ridge line to the south of Locus A and the drainage that passes through the site. It consists of another temporary camp location with associated bedrock milling. The main focus of the cultural material is in a level area somewhat enclosed by natural bedrock outcrops. The locus is approximately 40 m north/south by 90 m east/west. A subsurface component is very likely based on artifacts exposed in disturbed soils. Locus B includes at least three bedrock milling features. Feature A includes at least three slicks and Feature B includes one deep basin and one slick. Feature C is largely covered with dirt from brushing, but includes at least one slick. Artifacts at Locus B include 10+ fragments of clear and milky quartz, 1 quartzite cobble flake from the Ballena gravels, 2 porphyritic volcanic flakes from the Ballena gravels, 1 black volcanic flake that may be derived from the Lusardi Formation, and one porphyritic obsidian fragment that is probably from the source at Obsidian Butte. At least 5 Tizon Brown Ware sherds are also present. One large granitic pestle is also present along with at least three fragments of fire-affected rock. The integrity of this locus is fair to poor. Much of this ridgeline, including the locus area has been brushed in the past. Percolation testing occurred in the nearby vicinity as well.

Locus C is located on the north side of the drainage to the northwest of Locus A. It is located in a relatively level area of a ridge just south of a dirt road that climbs and bends at this location to follow the ridgeline to the north of the site. Locus C is highly disturbed by previous brushing possibly related to the percolation testing in the area. It covers an area approximately 15 by 15 m

in size and a subsurface deposit may have been present based on the presence of fire-affected rock in the graded area. The locus includes two clear quartz flakes, one porphyritic volcanic flake derived from the Ballena gravels, and three fire-affected rocks in close proximity to each other. The locus probably represented a very short-term use area before it was brushed.

Locus D is located on the northeastern side of Locus A in a relatively flat portion of the ridge. It probably represents another outlying temporary camp associated with the drainage to the south. The locus covers an area approximately 20 by 20 m in size. A shallow subsurface component may be present, but cultural material is sparse. Artifacts include 5 Tizon Brown Ware sherds and 3 fragments of cobble volcanic fire-affected rock. The area has been brushed in relation to percolation testing and integrity is low.

4.2.2 CA-SDI-18322 (NM-S-2)

Site CA-SDI-18322 is a bedrock milling station on what appears to have been a ridgeline near the base of a seasonal waterfall. The ridgeline appears to have been much more extensive in the past and this bedrock milling station may represent only a portion of the original site. Extensive grading west of the site has left site CA-SDI-18322 somewhat perched at the upper slope of a cut bank. The remaining site area is approximately 15 by 15 m in size. The bedrock milling feature is on a relatively level area below a larger boulder. The feature includes at least two basins, one shallow mortar, and three slicks. Associated artifacts include two cobble volcanic mano fragments and 5+ fire-affected rocks. Integrity of the remaining portion of the site is good, although again, the site was probably originally larger.

4.2.3 P-37-028204 (NM-I-1)

This isolate consists of two Santiago Peak Volcanic bifacial thinning flakes. Both are patinated interior flakes representing late-stage tool reduction. Both flakes were within 30 cm of each other. Surface visibility in the area is moderate to poor, but an extensive surface search of the area did not reveal additional artifacts. The flakes probably represent Archaic period or earlier tool reduction. The isolate is located on the edge of a relatively level portion of a ridge with extremely large boulders located to the north. Integrity of the area is very good with only a footpath nearby.

4.2.4 P-37-028205 (NM-I-2)

P-37-028205 is an isolated Tizon Brown Ware body sherd. It is located on a small, relatively level, terrace area between a seasonal drainage and a steeper rocky slope. The isolate is approximately 80 east of the drainage in an area of open soil. The area is undisturbed and integrity of the area is high. This isolate may have been discarded by the occupants of site CA-SDI-18321 as they moved along the drainage.

4.2.5 P-37-028205 (NM-I-3)

Isolate P-37-028206 consists of a mother-of-pearl button of probable historic age. It is likely associated with earlier historic occupation to the west of the current project area. The button is two hole and somewhat weathered. Very sparse scattered window glass is also present in the area and, along with the Eucalyptus trees, are also likely to be associated with activities outside the project area. The area appears to have been partially graded in the past in addition to being impacted by erosion related to animal pens in the area. Integrity of the area is poor.

4.3 TESTING RESULTS

Five cultural resources, CA-SDI-18321, CA-SDI-18322, P-37-028204, P-37-028205, and P-37-028206, were identified within the project area during the survey (See Figure 4). Site CA-SDI-18321 consists of four loci, Locus A-D, with a temporary camp and associated bedrock milling features. CA-SDI-18322 consists of a temporary camp and one bedrock milling feature. P-37-028204 is an isolate consisting of two Santiago Peak Volcanic bifacial thinning flakes. P-37-028205 is a single Tizon Brown Ware sherd and P-37-028206 is a shell button. As isolates, P-37-028204, P-37-028205, and P-37-028206 do not qualify as eligible for the California Register or the County RPO and no further work is needed to address these resources. CA-SDI-18321 and CA-SDI-18322 will be both directly and indirectly impacted by the current project plan, and testing of these resources was required to determine the integrity of these sites and to determine if additional data recovery would be necessary. The testing of these resources is described in greater detail below.

4.3.1 CA-SDI-18321 Locus A

Site CA-SDI-18321 consists of four spatially separated loci in close proximity to each other along a seasonal drainage (See Figure 4). Because the loci are geographically separate, and may or may not have been occupied simultaneously, each locus was treated individually in terms of the testing program. The testing results for each locus are described in greater detail below.

Structure and Soils

CA-SDI-18321 Locus A is located on a ridgeline between a small drainage to the west and a larger, major drainage along the southern side. Locus D is located to the northeast on a flat terrace area. Locus A appears to represent a temporary camp with associated bedrock milling features. The main activity within Locus A appears to be focused on a wider portion of the ridge where it joins the terrace area. As indicated on Figure 5, the main concentration of surface material is focused in an opening on the southeast side of the ridge line as the topography slopes to the drainage on the southeast side of the locus. Additional scattered artifacts and milling features are located along the ridgeline away from the main artifact concentration. During the testing program it was determined that the boulder outcrops along the drainage have been undercut by the stream channel along the southern edge of the locus. This has created a relatively large cave-like overhang area. This area was included with Locus A and testing was conducted to determine if the area served as a rock shelter.

Figure 5

CA-SDI-18321 Site Map

(Confidential figure located in Appendix G)

As indicated in Figure 6, the site is dominated by generally undisturbed chaparral vegetation dominated for the most part by chamise (*Adenostoma fasciculatum*). Percolation testing activity along the northern edge of the locus has resulted in a bulldozer cut through this area. The locus is otherwise generally undisturbed with relatively high integrity.

Soils throughout the locus were generally a medium brown sandy loam overlaying decomposing granite bedrock or unweathered bedrock. Organic content was generally low except near shrubs where surface leaf duff has accumulated. Charcoal appears to be sparsely distributed throughout the locus area as a result of natural fires. The presence of sparse charcoal was noted without relationship to cultural material content. This suggests that much of the charcoal present in the cultural deposits may be related to natural brush fires.

The STPs indicated that soils throughout much of the locus was moderately deep averaging over 40 cm. Although some bedrock and root obstacles were encountered, the locus appears to have a fairly well developed soil horizon series. Soils appear to have been largely developed in place with very limited evidence of colluvial accumulation. As mentioned above, the overall organic content of the soil was limited. This appears to correspond with the limited growth of annual plants and grasses within the locus and limited evidence of bioturbation.

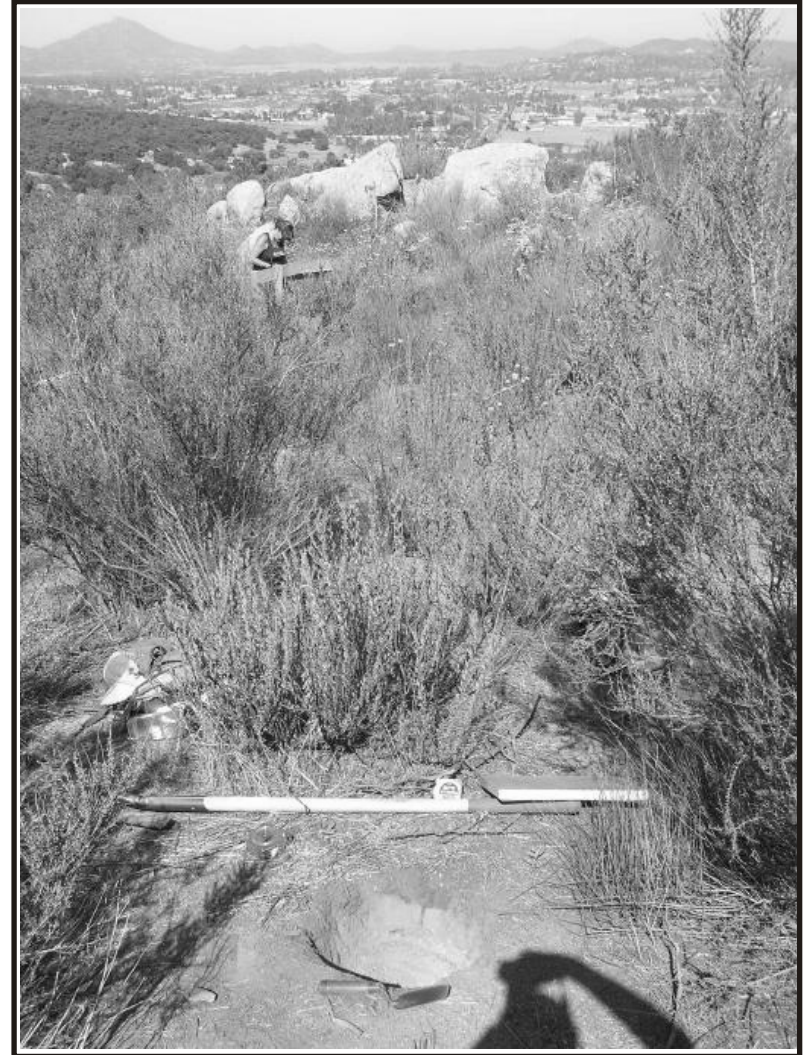
The soils within the two STPs excavated in the rock overhang area were markedly different. These soils generally consisted of coarse water sorted sand and silt. These soils suggested a more high-energy stream channel deposit.

Soils in Unit 1 appeared relatively homogeneous and were consistent with those found in the STPs (Figure 7). The soils appear to have been derived from natural on-site weathering with increasing amounts of decomposed granite found at greater depths. Stratigraphic integrity was fair with limited rodent disturbance. The soil in roughly the upper 10 cm of the unit had a slightly higher organic and silt content. This appears to represent the “A” soil horizon. It was a brown (10YR 4/3), poorly sorted, silty sandy loam.

The “B” soil horizon represents a transition between the topsoil and the weathered bedrock. In Unit 1 it extends from approximately 10 cm to approximately 45 cm in depth. This soil consisted of dark grayish brown (10YR 4/2) sand with coarser decomposed granite sand. The organic content in this soil horizon was low. While the transition between the A and B horizons was not strongly distinct, the transition to the “C” horizon and bedrock was much more distinct. Granitic bedrock was present in the northwest corner of the unit at approximately the 42 cm level. Outside the bedrock area there appears to be a thin soil transition layer between the decomposed granite subsoil and the “C” horizon. This transition layer is generally less than 5 cm thick and is composed of dark brown (7.5 YR 3/2) poorly sorted sand with decomposed granite. This layer is underlain by dark yellowish brown (10YR 4/4) decomposed granite that is very compact. The decomposed granite subsoil was encountered at approximately 48 cm in depth and is sterile of cultural material. Overall the stratigraphic profile indicated in Unit 1 indicates natural, rather than cultural stratigraphy. If cultural stratigraphy is present, it can only be indicated by differences in artifact distribution by depth.



CA-SDI-18321 Locus A Overview, South of Feature A, view to SW



CA-SDI-18321 Locus B Overview, view to WSW

Figure 6
CA-SDI-18321 Locus A and B Overview Photographs

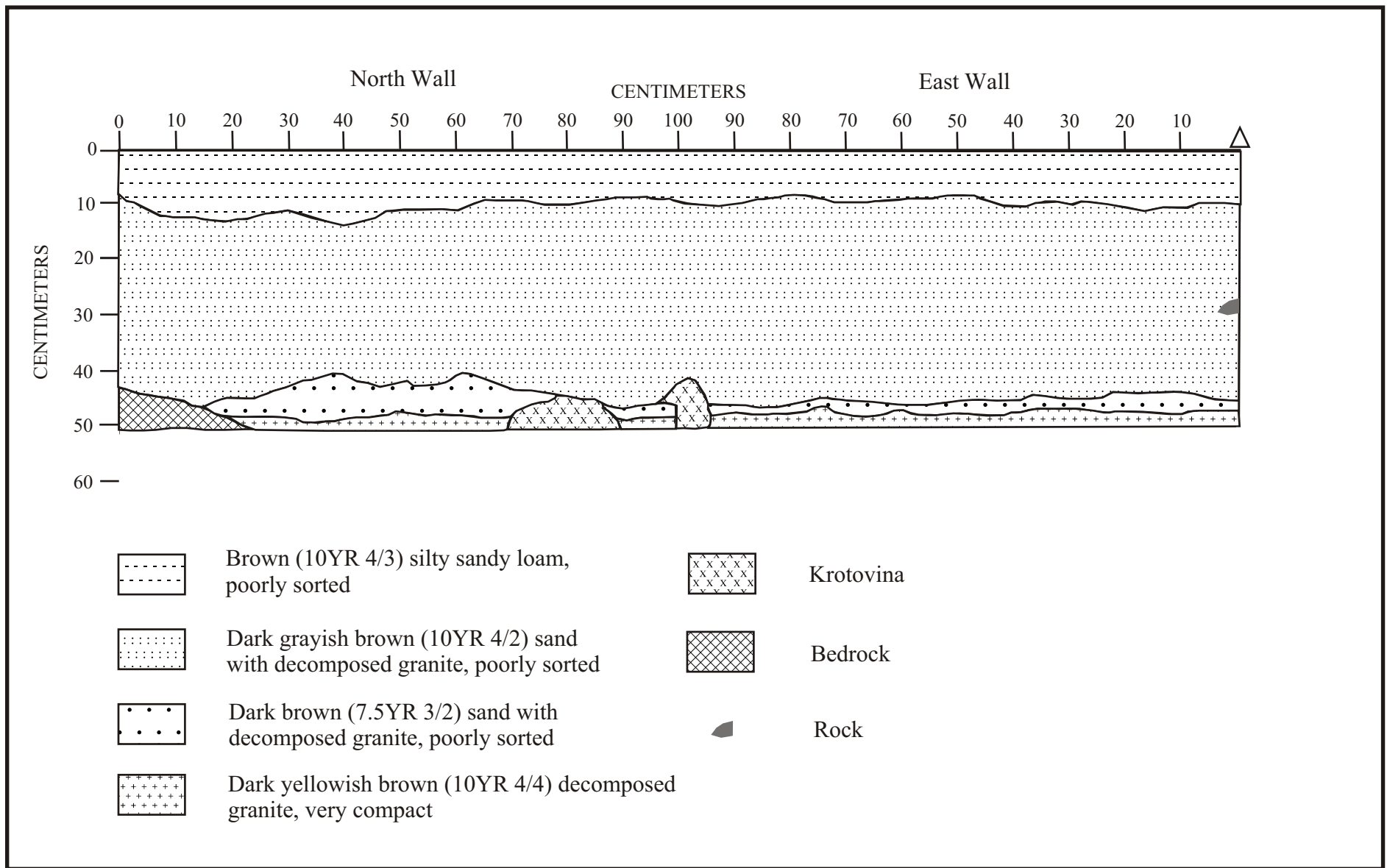


Figure 7
CA-SDI-18321
Locus A Unit Profile



Testing Results

Testing at CA-SDI-18321 Locus A included the recording of bedrock milling, mapping and surface collection, and the excavation of 15 STPs and 1 test unit. During the testing program, the surface of this locus was surveyed more intensely at closer intervals. Four additional bedrock milling features were identified within the locus during the testing phase. The seven bedrock milling features within Locus A are summarized in Table 4.

Table 4. Summary of Locus A Bedrock Milling

Feature	Slick	Basin	Mortar	Collared Mortar	Total Elements	Comments
A	1	2	0	0	3	Basins are well defined.
B	2	2	0	0	4	Moderate to limited use of elements.
C	0	0	1	0	1	Exfoliated grinding surface.
D	0	0	0	1	1	Partially exfoliated.
E	3	1	0	2	6	Collared mortars show heavy use but are exfoliated.
F	2	3	0	0	5	Highly exfoliated.
G	8	1	0	0	9	Most elements show limited use.
Total	16	9	1	3	29	

An interesting pattern to note with the bedrock milling distribution is that the features with mortars are generally within or just surrounding the area of greatest surface artifact distribution (See Figure 5). Milling features further from the main site activity area appear to have had less intensive use. Feature G, which is located furthest from the main activity area has the greatest number of milling elements, but these largely show limited use. Feature F with the two collared mortars shows some of the most intensive use although the surface is highly weathered. However, none of the mortars at the locus were very deep. The mortars associated with Feature C in the heart of the surface artifact concentration, and Feature D to the northeast, showed the most use with 9 cm of depth and 15 cm of depth, respectively.

Overall the milling activity at the site was dominated by slicks (N=16) suggesting that hard seed processing was a dominant activity at the locus. The nine basins and 4 mortars suggest that acorn processing may also have been an important activity at this locus. The lack of nearby coast live oak trees either suggests vegetation shift or the use of scrub oak species from the nearby chaparral.

Testing of Locus A also included artifact surface collection. The surface collection results are provided in Table 5. A total of 45 surface collection points were mapped resulting in the recovery of 44 artifacts in addition to bone and fire-affected rock. As indicated in the initial

discussion of site structure, the vast majority of surface artifacts were concentrated in the central portion of the locus with very few artifacts away from this concentration. This artifact concentration helps distinguish this locus as a separate activity area from the rest of the site.

Table 5. CA-SDI-18321 Locus A Surface Collection Results

Catalogue Number	Location (Shot #)	Artifact Type
SDI-18321-24	24	Flake
SDI-18321-25	25	Pottery
SDI-18321-26	26	Pottery
SDI-18321-27	27	Pottery
SDI-18321-28	28	Test Core
SDI-18321-29	29	Flake
SDI-18321-30	30	Flake
SDI-18321-31	31	Biface
SDI-18321-32	32	Flake
SDI-18321-33	33	Fire Affected Rock
SDI-18321-34	34	Angular Waste
SDI-18321-35	35	Angular Waste
SDI-18321-36	36	Angular Waste
SDI-18321-37	37	Flake
SDI-18321-38	38	Pottery
SDI-18321-39	39	Groundstone
SDI-18321-40	40	Flake
SDI-18321-41	41	Flake
SDI-18321-42	42	Flake
SDI-18321-43	43	Flake
SDI-18321-44	44	Angular Waste
SDI-18321-45	45	Flake
SDI-18321-46	46	Fire Affected Rock
SDI-18321-47	47	Angular Waste
SDI-18321-48	47	Pottery
SDI-18321-49	47	Groundstone (Possible)
SDI-18321-50	48	Pottery
SDI-18321-51	49	Fire Affected Rock
SDI-18321-52	50	Angular Waste
SDI-18321-53	50	Angular Waste
SDI-18321-54	51	Angular Waste
SDI-18321-55	52	Angular Waste
SDI-18321-56	52	Flake
SDI-18321-57	53	Fire Affected Rock
SDI-18321-58	54	Flake
SDI-18321-59	54	Pottery
SDI-18321-60	54	Bone
SDI-18321-61	55	Pottery

Table 5. CA-SDI-18321 Locus A Surface Collection Results (Continued)

Catalogue Number	Location (Shot #)	Artifact Type
SDI-18321-62	56	Bone
SDI-18321-63	57	Pottery
SDI-18321-64	58	Angular Waste
SDI-18321-65	58	Flake
SDI-18321-66	58	Bone
SDI-18321-67	59	Flake
SDI-18321-69	60	Flake
SDI-18321-70	61	Groundstone
SDI-18321-71	62	Pottery
SDI-18321-68	63	Fire Affected Rock
SDI-18321-72	64	Pottery
SDI-18321-73	65	Pottery
SDI-18321-74	66	Pottery
SDI-18321-75	67	Pottery
SDI-18321-76	68	Fire Affected Rock

As indicated in Table 6, surface artifacts were dominated by flaked lithic debitage. Debitage made up more than 57 percent of the surface artifacts. While this is typical of most prehistoric cultural resources, it also suggests that flaked lithic tool production was an important activity at the site. Prehistoric ceramics are generally associated with Late Prehistoric activity. The presence of 14 ceramic sherds on the surface suggests that Locus A contains a Late Prehistoric component or represents a locus of entirely Late Prehistoric activity. Flaked lithic tools on the surface were limited to one biface fragment. Only one test core was recovered from the surface. Other surface artifacts included two manos and one metate fragment. These, when combined with the bedrock milling evidence suggest that seed processing was also an important activity at this site. Small amounts of animal bone and fire-affected rock indicated that food cooking and preparation also occurred at this locus, indicating its use as a temporary camp. Based on the surface collection results, Locus A is approximately 81 meters north/south by 100 meters east/west.

Table 6 indicates that a total of 159 artifacts and more than 12,704.5 grams of ecofacts were recovered during the testing program at Locus A. Approximately 40 percent of this material was recovered from the test unit while surface collection and STP testing resulted in the recovery of roughly similar percentages of material. As with the surface collection, testing overall was dominated by the recovery of flaked lithic debitage which made up approximately 75 percent of the material recovered. This material was followed by ceramics and groundstone tools in terms of frequency. Relatively few flaked lithic tools were recovered during testing despite the amount of debitage present.

Table 6. CA-SDI-18321 Locus A Cultural Material by Provenience

Artifact Type	Surface	STPs	Unit	Total	Percent
Angular Waste	16	74	333	423	56.3
Flake	17	70	199	286	38.0
Test Core	1	0	0	1	0.1
Utilized Flake	0	0	1	1	0.1
Retouched Flake	0	1	1	2	0.3
Projectile Point	0	0	3	3	0.4
Biface	1	0	0	1	0.1
Metate	1	0	1	2	0.3
Mano	2	1	5	8	1.1
Bone Awl	0	0	1	1	0.1
Pottery	15	5	4	24	3.2
Total Count	53	151	548	752	
Percent	7.0	20.1	72.9		100.0
Bone	1.2	4.1	43.3	48.6	0.4
Charcoal	0.0	0.1	0.0	0.1	0.0
Fire Affected Rock	9002.2	1059.3	2594.3	12655.8	99.6
Total Weight (g)	9003.4	1063.5	2637.6	12704.5	
Percent	70.9	8.4	20.8		100.0

STP placement was based on the surface artifact density distribution and upon additional site features. A total of 15 STPs were excavated at Locus A. STPs were excavated in north/south and east/west lines through the main concentration of surface artifacts with additional STPs placed near outlying features and in the rock overhang. Along the north/south line 5 STPs were excavated at 10m intervals along the east side of milling Features A and C and to the west of milling Features D and F. Along the east/west line 6 STPs were excavated. Four additional STPs were excavated around two clusters of milling features and an isolated concentration of surface ceramics. These include one STP excavated between milling Features E and F, and two STPs were excavated up slope and downslope from milling Feature G. These STPs were excavated to determine if subsurface cultural deposits were located around the milling features. A final STP was excavated in area where isolated ceramic sherds were located. In addition, two STPs (R-1 and R-2) were excavated in the rock overhang area to determine if cultural deposits were associated. STPs ranged from 10 to 60 cm in depth depending on the location of the STP.

The STPs served to define the boundaries of a subsurface deposit that is approximately 45 m north/south by 50 m east/west and covers an area of approximately 2,139 square meters when its shape is considered (See Figure 5)

The concentration of surface artifacts also generally corresponds to the positive STPs distribution (See Figure 5). The northeastern portion of the locus has a sparse surface artifact scatter and also appears to lack a subsurface deposit.

Seven of the fifteen STPs excavated at Locus A were positive as indicated in Table 7. A total of 50 artifacts were recovered from STP excavation. The artifacts were again dominated by lithic debitage which made up 90 percent of the cultural material recovered. Artifacts recovered from the STPs include 18 pieces of angular waste, 27 flakes, 1 retouched clear quartz flake, 1 mano fragment and 3 pieces of Tizon Brown Ware pottery. Table 7 indicates that STP 0N/10W was by far the most productive STP. This STP reached a depth of 54 cm before encountering decomposed granite subsoil. Cultural material was encountered throughout the depth of the STP suggesting that an approximately 50 cm deep cultural deposit was present in this area. Although STPs 0N/0E, 0N/20W, and 10S/0E also indicated the presence of fairly substantial subsurface deposits, the highest subsurface artifact density was clearly in the vicinity of STP 0N/10W.

Table 7. CA-SDI-18321 Locus A STP Results by Provenience

Artifact Type	STP 0N/0E	STP 0N/10W	STP 0N/20W	STP 10N/0E	STP 10S/0E	STP 31W/25S	STP 40S/40W	Total	Percent
Angular Waste	5	59	1	0	9	0	0	74	49.0
Flake	8	45	5	0	12	0	0	70	46.4
Mano	1	0	0	0	0	0	0	1	0.7
Retouched Flake	0	0	1	0	0	0	0	1	0.7
Pottery	0	0	0	0	0	4	1	5	3.3
Total Count	14	104	7	0	21	4	1	151	
Percent	9.3	68.9	4.6	0.0	13.9	2.6	0.7		100.0
Bone	5.0	3.6	0.0	0.1	1.1	0.0	0.0	9.8	99.0
Charcoal	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.0
Total Weight (g)	5.0	3.7	0.0	0.1	1.1	0.0	0.0	9.9	
Percent	50.5	37.4	0.0	1.0	11.1	0.0	0.0		100.0

Table 8 indicates that the subsurface deposit is present at depth of approximately 50cm. Again, this maximum depth was present in STP 0N/10W. The average depth of the STPs overall was approximately 40 cm. The majority of artifacts from the STPs (42%) was recovered from the 10-20 cm level with a gradual fall-off below this. It is interesting to note that the upper level of the STPs was not the most productive, suggesting additional soil development after the deposition of the artifacts. Because the STPs indicated that there was a subsurface component, an additional test unit was excavated to better evaluate the integrity and content of the subsurface deposit.

Table 8. CA-SDI-18321 Locus A STP Results by Depth

Artifact	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	Total	Percent
Angular Waste	5	26	17	14	12	74	49.0
Flake	6	26	16	16	6	70	46.4
Mano	1	0	0	0	0	1	0.7
Retouched Flake	0	0	1	0	0	1	0.7
Pottery	5	0	0	0	0	5	3.3
Total Count	17	52	34	30	18	151	
Percent	11.3	34.4	22.5	19.9	11.9		100.0
Bone	0.7	1.5	1.6	1.6	0.0	5.4	0.9
Fire Affected Rock	0.0	67.6	377.0	74.6	75.5	594.7	99.1
Charcoal	0.0	0.0	0.0	0.1	0.0	0.1	0.0
Total Weight (g)	0.7	69.1	378.6	76.3	75.5	600.2	
Percent	0.1	11.5	63.1	12.7	12.6	100.0	100.0

Based on the results of the STP testing a single test unit (Unit 1) was excavated at Locus A. The test unit was excavated just southeast of STP 0N/10W where the subsurface deposit appeared to be the thickest and the greatest amount of subsurface artifacts appeared to be present.

Table 9 indicates that the artifact recovery from Unit 1 was moderately good with a total of 65 artifacts in addition to 1.7 grams of animal bone and 903.2 grams of fire-affected rock. The artifact assemblage from Unit 1 was relatively evenly distributed by depth. The greatest artifact count is from the 0-10 cm level but artifact counts remain fairly even throughout the soil horizon. The absence of major artifact frequency fluctuations with depth suggests that the deposit has been mixed over time by some level of bioturbation and incorporated throughout the native soils. A higher concentration of fire-affected rock in the 20-40 cm levels suggests the potential for artifact settling through time. As with the other testing, 78 percent of the cultural material recovered was debitage. Artifacts recovered from Unit 1 include 9 pieces of angular waste, 42 flakes, 2 pieces of pottery, 5 mano fragments, 1 metate fragment, 3 projectile points, 1 retouched flake, 1 utilized flake, 1 bone awl tip, bone and fire affected rock. It is interesting to note that all of the pottery and projectile points were recovered from the upper 20 cm of the unit. Although no other distinct artifact difference was observed, it could suggest multicomponent occupation.

Table 9. CA-SDI-18321 Locus A Unit Summary by Depth

Artifact	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	Total	Percent
Angular Waste	74	73	99	74	13	333	60.8
Flake	61	31	43	45	19	199	36.3
Mano	2	1	1	1	0	5	0.9
Metate	0	0	0	1	0	1	0.2
Projectile Point	2	1	0	0	0	3	0.5
Retouched Flake	1	0	0	0	0	1	0.2
Utilized Flake	0	0	0	1	0	1	0.2
Bone Awl	0	0	0	1	0	1	0.2
Pottery	2	2	0	0	0	4	0.7
Total Count	142	108	143	123	32	548	
Percent	25.9	19.7	26.1	22.4	5.8		100.0
Bone	4.3	5.4	2.7	4.2	1.1	17.7	2.5
Fire-Affected Rock	88.1	0.0	325.0	475.7	14.4	903.2	100.0
Total Weight (g)	92.4	5.4	327.7	479.9	15.5	920.9	
Percent	10.0	0.6	35.6	68.0	1.7		100.0

Artifact Analysis

Bifacial Tools

A total of three projectile points (Figure 8) and one biface fragment were recovered during the testing program at Locus A of site CA-SDI-18321. The biface fragment was recovered from the surface while the three projectile points were recovered from the upper 20 cm of Unit 1. All of the bifacial tools were made from milky quartz that was probably acquired in the nearby region. The various stages of completion of the bifacial tools suggest that they were being manufactured on site. As will be discussed further below the dominance of quartz debitage in the lithic assemblage supports this assumption.

The biface fragment (SDI-18321-31) was recovered from the surface of the locus within the high density surface artifact concentration. As indicated in Figure 5 and Table 5, the biface was recovered just southeast of Unit 1, indicating that all the bifacial tools recovered from this locus were present in a single concentrated area. Only a tip of the tool was recovered. The size, thickness, and weight of the remaining fragment (Table 10) suggest that this tool is too large for a finished projectile point. It may represent an earlier stage of reduction that broke during manufacture.

Table 10. CA-SDI-18321 Locus A Bifacial Tool Attributes

Cat#	Location	Level	Type	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)
SDI-18321-31	Shot#31	Surface	Biface Fragment	Milky Quartz	24.22+	17.81+	7.08+	2.5+
SDI-18321-201	Unit 1	0-10cm	Projectile Point (Cottonwood Triangular)	Milky Quartz	19.83+	17.27	4.96	1.7
SDI-18321-202	Unit 1	0-10cm	Projectile Point (Cottonwood Triangular)	Milky Quartz	22.7+	14.99+	6.54	1.5+
SDI-18321-218	Unit 1	10-20cm	Projectile Point (Cottonwood Triangular)	Milky Quartz	17.28+	10.87+	6.25	0.7+

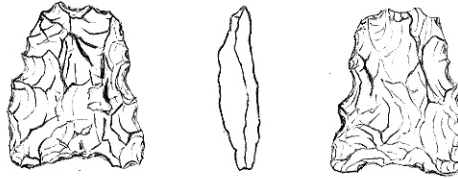
The three other bifacial tools recovered during testing all appear to be late stage Cottonwood Triangular projectile points (See Figure 8). All three of these points appear to have been broken during manufacture. Cottonwood Triangular projectile points are associated with the Late Prehistoric period in the region and are particularly frequent within Ipai and Luiseño territory within the northern portion of San Diego County.

Flaked Lithic Tools

Four other flaked lithic tools were recovered during the testing program at Locus A. All of these tools were recovered from subsurface contexts. The flaked lithic tools are largely informal, including three retouched flakes and one utilized flake. Two of the retouched flakes are from STP 0N/20W. Artifact SDI-18321-162 was recovered from the 10-20 cm level. It is a thin, fine-grained gray aphanitic Santiago Peak Volcanic flake fragment that is moderately patinated. The flake fragment has been unifacially retouched along one very short edge (<1 cm), although the working edge could have been larger before the tool was fragmented. The edge may also be utilized with a small amount of rounding and polishing present. This artifact appears to have been used as an expedient cutting tool.

Artifact SDI-18321-167 was recovered from the 20-30 cm level of STP 0N/20W. It represents a relatively large and thick flake of coarse-grained gray Santiago Peak Volcanic material. The distal end of the flake appears to have spalled off at some point. The proximal end of the flake includes the platform and several previous negative flake scars. The lateral edge of the flake both show intentional unifacial retouching. The retouching matches the patination on the rest of the artifact. No clear rounding or utilization is present, so it is unclear if this artifact was used as a tool, or represented a large enough flake that it was undergoing secondary reduction when it was discarded.

Catalog #201



Catalog #218



Catalog #202



Catalog #253

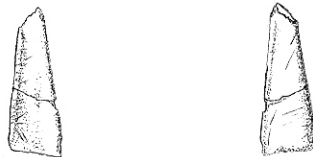


Figure 8
CA-SDI-18321 Artifact Illustrations

The third retouched flake was recovered from the 0-10 cm level of Unit 1 (SDI-18321-197). This artifact is made from a gray porphyritic Santiago Peak Volcanic flake with only moderate patination. The artifact is made from fairly fine grained material that has been unifacially retouched along one edge, enhancing a protruding corner of the artifact. The tool shows use wear rounding and polish on the protruding corner, suggesting use as a boring or punching tool.

The final flaked lithic artifact from Locus A (SDI-18321-249) is a clear quartz crystal fragment that appears to represent an angular waste fragment. It was recovered from the 30-40 cm level of Unit 1. The artifact shows the crystal facet along one side, but is otherwise broken suggesting it was not used as a crystal itself. One edge of the artifact shows a series of unifacial small flake removals. These are very short in nature and may have been the result of crushing during utilization rather than intentional flake removal.

Test Core

A single core (SDI-18321-28) was recovered during the testing program at Locus A. The core was recovered from the surface of the site just south of Feature A. The core is made of milky quartz and shows a limited number of flake removals either due to the poor flaking qualities of the stone or its limited use as a test core. The stone includes multiple internal fractures. Flaking was multidirectional with no clear reduction pattern evident.

Debitage

Debitage represents the largest amount of cultural material recovered from Locus A. Debitage represents 75% of the artifacts recovered indicating that one of the major activities at this site was tool production and/or finishing.

As indicated in Table 11, the majority of thedebitage was clear or milky quartz material, probably derived from locally available materials. The assemblage was dominated by milky quartz, approximately 31%, and clear or crystalline quartz made up the second greatest portion at 24% of thedebitage assemblage. This material may have been derived from pegmatite dikes in the Ramona Mining District in the next valley to the east of the project. More intensive use of quartz use has often been associated with the Late Prehistoric period when small point production allowed the use of lithic materials with poorer flaking qualities and smaller core size.

The next most abundantdebitage material was aphanitic Santiago Peak Volcanic, either green or black in color. This material made up approximately 21 percent of the assemblage. Most of this material could be securely assigned to the Santiago Peak Volcanic category, but at least one item (SDI-18321-24) and possibly four others may overlap with the Lusardi Formation Volcanic material, but lacks specifically diagnostic characteristics. A single piece of Santiago Peak Volcanic material from the 4-S Ranch area near Lake Hodges is present in the assemblage (SDI-18321-143). This material is brown and translucent volcanic.

Table 11. CA-SDI-18321 Locus A Debitage Materials and Condition

Flake Type	Clear Quartz	Milky Quartz	Santiago Peak Volcanic	Cobble Volcanic	Granitic	Lusardi Formation Volcanic	Quartzite	Chert	Gabboric	Aplite	Total	Percent
Angular Waste	36	378	5	0	1	1	1	0	0	1	423	60.1
Interior	57	121	11	0	7	0	7	1	1	0	205	29.1
Primary	0	24	2	5	0	0	1	0	0	0	32	4.5
Secondary	9	31	1	0	2	0	3	0	0	0	46	6.5
Total	102	554	19	5	10	1	12	1	1	1	704	
Percent	14.5	78.7	2.7	0.7	1.4	0.1	1.7	0.1	0.1	0.1		100.0

A single large fragment of Lusardi Formation Volcanic material (SDI-18321-36) was recovered from the surface of this locus. This fragment shows the characteristic banding. This material is available from small outcrops within approximately five miles to the south of the project area. It has qualities similar to Santiago Peak Volcanic material, although it is often more coarse-grained.

Quartzite material also made up a fair percentage of the lithic material from Locus A (17.8%). This material was obtained from two sources. The assemblage includes both quartzites derived from Eocene cobbles and quartzites from the Julian Schist Formation. Cobble sources are available in the Ballena Gravels approximately 1.5 miles south of the project area while low-quality Julian Schist-derived quartzites are available further to the east of the project area. Two fragments of Eocene cobble volcanic material were present in the debitage assemblage that are also derived from the Ballena gravels.

Other material types in the debitage assemblage included a single granitic primary flake (SDI-18321-222). This flake is very large and probably represents the initial reduction of a large subrounded granitic rock for shaping into a portable metate. The single flake of chert in the assemblage (SDI-18321-150) was recovered from STP 0N/10W. It is white and slightly translucent. The surface of the flake is slightly rounded due to weathering. The flake is not diagnostic of a particular chert sources, but fits the range of variation of secondary chert materials derived from the Imperial Formation gravels to the east in Imperial County.

The vast majority of the debitage (70%) lacked cortex. This probably reflects the use of quartz dike sources which lack cortex and the distance to sources of other materials such as the Santiago Peak Volcanics. The debitage at this locus reflects core reduction technology dominated by interior thinning flakes. No large bifacial thinning flakes were present and the assemblage is largely characteristic of flake reduction for the production of arrow points and expedient tools. Overall the debitage assemblage reflects technological indicators suggesting that the locus is dominated by a single component Late Prehistoric assemblage.

Groundstone

Groundstone tools were nearly as abundant at Locus A as flaked lithic tools, indicating the importance of seed processing at this activity area (Table 12). A total of 8 mano fragments and 2 metate fragments were recovered during testing in addition to the bedrock milling features at this locus. The Ballena Gravels provided well-rounded porphyritic volcanic cobbles as ready-shaped manos. Six of the eight mano fragments were made from the Eocene volcanic cobbles while one mano fragment was made from a quartzite cobble from the same formation. The remaining mano is made from a granitic cobble. One of the manos was recovered from STP 0N/OE (SDI-18321-114), two were recovered from the surface (SDI-18321-39 and SDI-18321-70) and five were recovered from Unit 1 (SDI-18321-199, -200, -217, -223, and -236), from all levels except 40-50cm. The presence of these groundstone artifacts and the milling features in the area indicates that seed processing was a large component of the activities at this locus.

Table 12. CA-SDI-18321 Locus A Groundstone Tool Attributes

Cat#	Location	Level	Type	Material	Length (mm)	Width (mm)	Thickness (mm)	Weight (g)
SDI-18321-39	Shot#39	Surface	Mano	CV	93.3+	109.89	50.66	856
SDI-18321-50	Shot#47	Surface	Metate	Granitic	28.48+	19.95+	28.74+	17.5
SDI-18321-70	Shot#61	Surface	Mano	CV	-	-	-	59
SDI-18321-114	STP 0N/ 0E	0-10cm	Mano	Quartzite	28.57+	16.01+	11.62+	4.5
SDI-18321-199	Unit 1	0-10cm	Mano	CV	42.9+	28.75+	11.38+	14.4
SDI-18321-200	Unit 1	0-10cm	Mano	CV	40.49+	24.77+	41.31+	34.7
SDI-18321-217	Unit 1	10-20cm	Mano	CV	26.4+	15.24+	19.54+	6.1
SDI-18321-223	Unit 1	20-30cm	Mano	CV	71.21+	56.83+	55.04+	138
SDI-18321-236	Unit 1	30-40cm	Mano	Granitic	25.33+	21.23+	7.66+	4.7
SDI-18321-237	Unit 1	30-40cm	Metate	Granitic	52.41+	25.9+	19.95+	35.7

Most of the mano fragments are small and specific characteristics could not be determined. Artifact SDI-18321-39 from the surface of the locus provides a good example of a characteristic mano. It is made from a porphyritic volcanic cobble and shows heavy use and shouldering. Pecking to make the surface more abrasive is present on one side.

One small metate fragment (SDI-18321-50) and one larger metate fragment (SDI-18321-237) were also recovered from the locus, suggesting that milling activities took place on both portable metates and on the nearby bedrock milling features. The nearly whole metate has been shaped into a circular form from the local granitic material. It was recovered from the 30-40 cm level of Unit 1 and is partially fire-affected. It reflects an unshaped slab metate. Nearly all the manos and metate fragments are fire-affected, suggesting discard and reuse as hearth stones.

Pottery

Fourteen fragments of Tizon Brown Ware pottery were recovered during testing at Locus A. The ceramics include one rim and thirteen body sherds. The single rim sherd (SDI-18321-184) is direct with a rounded lip. The fragment is too small for an accurate vessel mouth diameter determination, but it appears to reflect a wide-mouth cooking pot. The rim sherd shows abundant hornblende inclusions suggesting a gabbroic terrain source for the clay. The body sherd assemblage is more variable, and sherd inclusions suggest the use of at least three different source terrains. Roughly a

third of the assemblage contains abundant hornblende inclusions, again suggesting a gabbroic source terrain for the clay, while the majority of the assemblage is dominated by granitic inclusions. These inclusions suggest weathered granitic sources for the clay that could be present on site or in the nearby vicinity. A small number of sherds lack granitic inclusions and have abundant biotite mica, suggesting a source terrain in the Julian Schist Formation.

The presence of Tizon Brown Ware shows use of residual clays typical of the Native American pottery produced in western San Diego County. Tizon Brown Ware was made using the paddle-and-anvil technique. Pottery is directly associated with the Late Prehistoric period and shows the use of storage and/or cooking containers at the locus.

Bone Awl

Two fragments (SDI-18321-252 and SDI-18321-253) of what may be the same bone awl were recovered from the 30-40 cm level of Unit 1. One of the fragments (the tip) (SDI-18321-253) is broken in half (See Figure 8), while the other fragment is broken into four pieces. The bone tool appears to have been made from a large mammal long bone, but diagnostic attributes other than the thickness do not remain. Striations are clearly visible on all pieces. Although the two portions do not fit it is possible that they were one item. Bone awls were typically used in the manufacture of basketry items and this tool may represent an indirect reflection of this activity at the locus.

Faunal Bone

A total of 48.6 grams of bone was recovered during testing. The material recovered during the testing included 43.3 grams from Unit 1, 1.2 grams from the surface, and 4.1 grams from the STPs. Approximately 60% of the recovered bone was burned and appears to be culturally associated animal bone and not representative of natural animal death. A few of the cultural bones were calcined and have been exposed to a direct flame at extremely high temperatures (greater than 800° Celsius). It is likely that the calcined specimens were discarded in a fire hearth.

Most of the faunal bone assemblage is unidentifiable to the species level, but it is dominated by large and medium-size mammal. Rabbit and pocket gopher are the only identifiable animals in the assemblage, although the large mammal bone probably represents deer. No human remains were recovered during testing at this locus.

Charcoal and Fire-Affected Rock

Charcoal was present in small amounts during subsurface excavations at the site. Some recent surface charcoal associated with brush fires was noted on the surface. The subsurface charcoal may be cultural in origin based on the amount of fire-affected rock. The presence of fire-affected rock at the site does indicate that fire was a part of cultural activity at the site and that features may be present within the area of the locus.

Fire-affected rock was an important component of the cultural material. It indicates that cooking and heating were a part of the activities at Locus A. The majority of fire-affected rock approximately 70% was recovered from the surface, 20% within the 20-40 cm levels of Unit 1 and approximately 8% from the STPs. The material was scattered both on the surface and within the unit, and does not represent any features. The fire-affected rock distribution does correspond with the artifact distribution, indicating that it is not associated with natural brush fires. Most of the fire-affected rock was made up of locally available sub-rounded granitic rock fragments that could have been collected nearby although cobble volcanic groundstone tools appear to have been recycled as fire-affected rock.

4.3.2 CA-SDI-18321 Locus B

Structure and Soils

CA-SDI-18321 Locus B represents a temporary camp with associated bedrock milling. Locus B is located on a higher and more narrow ridgeline south of Locus A (See Figure 5). A series of large granitic boulder outcrops is present near the end of the ridge and these boulders inclose a small level area where most of the cultural activity appears to have been focused. The locus is slightly more distant from the seasonal drainage between it and Locus A, but this probably also provided water to the inhabitants. The locus, apart from the boulders, appears to have been brushed as part of fire clearing associated with a water tank and/or septic system, related to an existing structure that is present to the southwest of the locus. As indicated in Figure 6, the area still contains some native vegetation around the boulder outcrops. The integrity of the locus overall appears to have been somewhat compromised based on the evidence of surface brushing.

Either partially as a result of brushing or the steeper ridgeline, soils at Locus B were generally shallow. Most of the STPs were about 20 cm in depth of decomposed granite or bedrock. One of the STPs (10S/0E) was located in what appeared to be a push pile related to the brushing. Only STP 5S/0E appeared to show significant depth with decomposed granite encountered at the end of 40 cm. Soils in the STPs were generally dark brown sandy loam grading into yellowish decomposed granite. The upper soil horizon was lighter in color on the eastern edge of the locus, possibly reflecting a midden deposit with increased organic material in the main portion of the locus west of this area.

As indicated in the unit profile shown in Figure 9, soils depth within Locus B reached a maximum of 60 cm below ground surface. The upper 10 to 20 cm of the soil horizon was brown silty sand (10YR 4/3) that was poorly sorted. This appears to contain a moderate amount of organic material and may represent the native topsoil augmented by culturally organic material. Below this stratum to between 40 and 60 cm was what appears to represent the "B" soil horizon. This soil was very dark grayish-brown (10YR 3/2) silty sand. Several rocks and shrub roots were present in this stratum along with a small amount of rodent disturbance.

Below this stratum was an irregular surface of granitic boulders that ranged in depth between approximately 40 and 60 cm. In one portion of the north sidewall was a stratum of dark yellowish brown (10YR 4/4) decomposed granite that was very compact. This appears to represent more active weathering between the less weathered boulder surfaces.

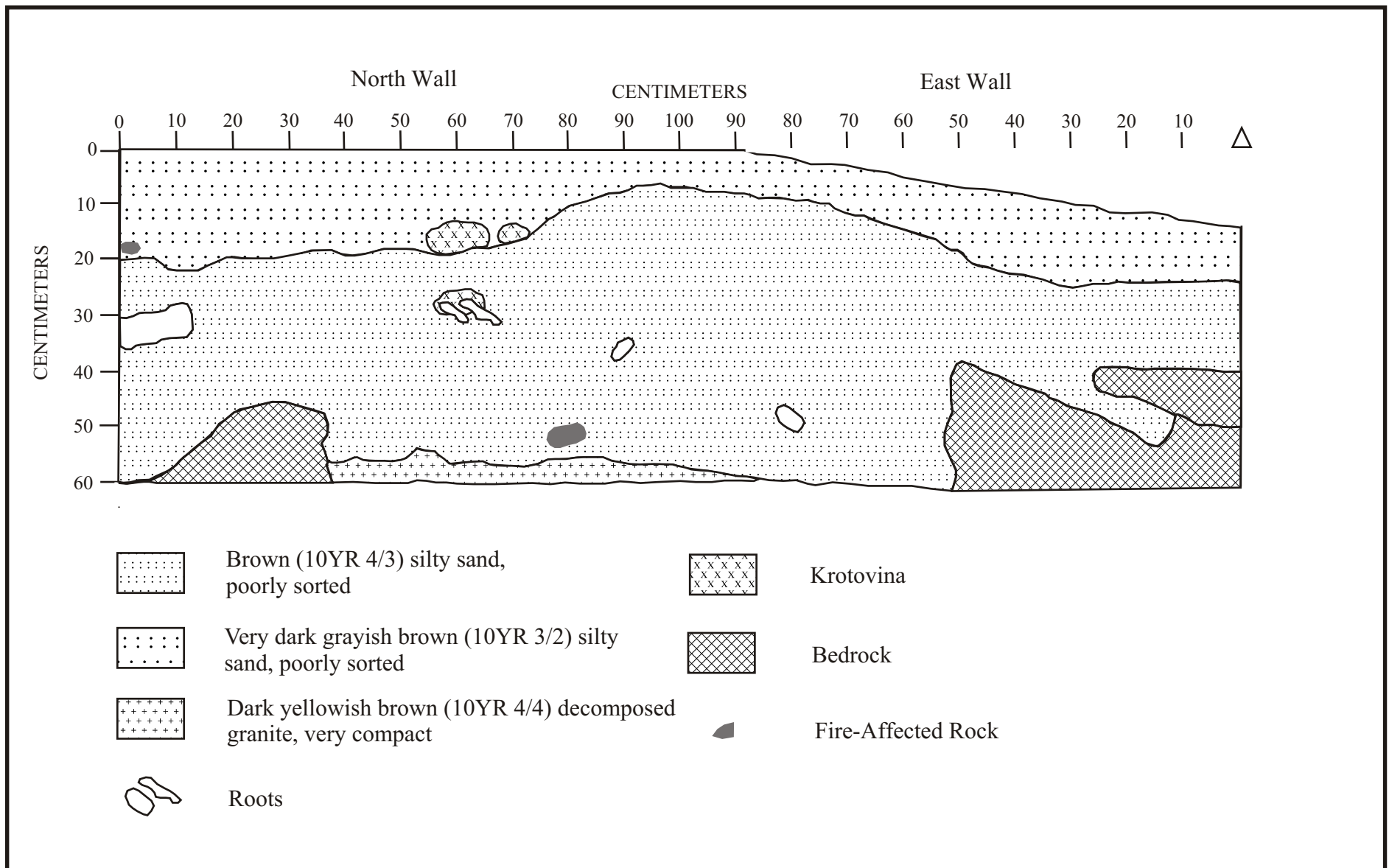


Figure 9
CA-SDI-18321
Locus B Unit Profile



Overall, soils at Locus B appeared to have substantial depth in only a small area associated with the highest concentration of cultural material. Other than surface disturbance related to brushing, soils appear to represent natural soil development and not cultural stratigraphy. Increased organics in the main area of the locus may reflect some midden development, however.

Testing Results

Testing at Site CA-SDI-18321 Locus B included recordation of the bedrock milling, mapping and surface collection, and the excavation of seven STPs and one test unit (See Figure 5). Additional and more intensive survey during the testing phase identified a total of eight bedrock milling features at this locus (Table 13).

Table 13. Summary of Locus B Bedrock Milling

Feature	Slick	Basin	Mortar	Total Elements	Comments
A	1	0	0	1	High spots only.
B	5	2	0	7	Use limited and mostly on high spots.
C	3	0	0	3	Use limited and mostly on high spots.
D	1	0	1	2	Mortar is in good condition with battering on the interior.
E	2	2	0	4	Fair condition showing more use.
F	2	0	0	2	Fair condition showing more use.
G	2	1	0	3	Fair condition showing more use.
H	3	1	0	4	Fair condition showing more use.
Total	19	6	1	26	

There are only a few less milling elements at Locus B than at Locus A (29 at Locus A versus 26 at Locus B). This may suggest that roughly the same size group occupied both loci or the same group occupied both areas, but at different times. The intensity of milling activity at Locus B seems slightly reduced. Only one mortar is present at Locus B, and it has not been intensively used with a depth of only 3.5 cm. There is also a slightly higher ratio of slicks to basins at Locus B, again suggesting less intensive use.

Milling features, like the boulder outcrops are focused around the main activity area. Like Locus A, the mortar is closely related to the area of most intense activity.

Testing of Locus B also included artifact surface collection. The surface collection results are provided in Table 14. A total of 35 surface collection points were mapped, resulting in the recovery of 22 artifacts, in addition to bone and fire-affected rock. As indicated in the initial discussion of structure, the vast majority of surface artifacts were concentrated in a somewhat sheltered area surrounded by larger boulder outcrops. This artifact concentration helps distinguish this locus as a separate activity area from the rest of the site.

Table 14. CA-SDI-18321 Locus B Surface Collection Results

Catalogue Number	Location (Shot #)	Artifact Type
SDI-18321-77	#86	Flake
SDI-18321-78	#86	Mano
SDI-18321-79	#89	Flake
SDI-18321-80	#87	Mano
SDI-18321-81	#88	Pestle
SDI-18321-82	#90	Faunal
SDI-18321-83	#91	Angular Waste
SDI-18321-84	#92	Tizon Brown Ware
SDI-18321-85	#92	Fire-affected Rock
SDI-18321-86	#93	Tizon BrownWare
SDI-18321-87	#94	Flake
SDI-18321-88	#94	Fire-affected Rock
SDI-18321-89	#95	Tizon BrownWare
SDI-18321-90	#96	Fire-affected Rock
SDI-18321-91	#97	Tizon BrownWare
SDI-18321-92	#98	Flake
SDI-18321-93	#99	Fire-affected Rock
SDI-18321-94	#99	Fire-affected Rock
SDI-18321-95	#99	Hammerstone
SDI-18321-96	#99	Fire-affected Rock
SDI-18321-97	#100	Fire-affected Rock
SDI-18321-98	#101	Fire-affected Rock
SDI-18321-99	#101	Angular Waste
SDI-18321-100	#102	Fire-affected Rock
SDI-18321-101	#103	Fire-affected Rock
SDI-18321-102	#104	Angular Waste
SDI-18321-103	#105	Fire-affected Rock
SDI-18321-104	#106	Tizon Brownware
SDI-18321-105	#107	Hammerstone
SDI-18321-106	#108	Tizon Brown Ware
SDI-18321-108	#110	Flake
SDI-18321-109	#111	Fire-affected Rock
SDI-18321-110	#112	Tizon Brown Ware
SDI-18321-111	#113	Flake
SDI-18321-112	#114	Flake

As indicated in Table 15, the artifacts recovered during surface collection include 3 pieces of angular waste, 7 flakes, 2 hammerstones, 2 mano fragments, 1 pestle, and 7 pieces of pottery.

Debitage made up a relatively small percent of the surface artifacts while other artifact classes, such as groundstone tools and ceramics were well represented. As at Locus A, the presence of ceramics in the surface assemblage suggests that Locus B was occupied during the Late Prehistoric period. No flaked lithic tools were recovered from the surface, although two hammerstones were present. Small amounts of animal bone and fire-affected rock indicated that food cooking and preparation also occurred at this locus, indicating use as a temporary camp. Based on the features and surface artifact distribution, Locus B is approximately 19 meters north/south by 41 meters east/west.

Table 15 indicates a total of 162 artifacts and more than 5,542.4 grams of ecofacts were recovered during the testing program at Locus B. Approximately 73 percent of this material was recovered from the test unit, while surface collection and STP testing resulted in the recovery of roughly similar percentages of material. The artifact abundance in the test unit suggests that cultural material is highly concentrated within a single portion of the locus. Testing results were dominated by the recovery of flaked lithicdebitage, which made up approximately 70 percent of the assemblage. This material was followed by ceramics and groundstone tools in terms of frequency. No flaked lithic tools were recovered during testing despite the amount ofdebitage present.

Table 15. CA-SDI-18321 Locus B Cultural Material by Provenience

Artifact Type	Surface	STPs	Unit	Total	Percent
Angular Waste	3	2	38	43	26.5
Flake	7	10	57	74	45.7
Core	0	0	1	1	0.6
Hammerstone	2	0	2	4	2.5
Metate	0	0	3	3	1.9
Mano	2	0	3	5	3.1
Pestle	1	0	0	1	0.6
Pottery	7	9	15	31	19.1
Total Count	22	21	119	162	
Percent	13.6	13.0	73.5		100.0
Bone	0.2	1.0	29.4	30.6	0.6
Fire Affected Rock	3349.1	472.1	1690.6	5511.8	99.5
Total Weight (g)	3349.3	473.1	1720.0	5542.4	
Percent	60.4	8.5	31.0		100.0

STP placement was based on the surface artifact density distribution and upon additional site features. A series of 7 STPs were excavated at intervals ranging from 5 to 10 meters apart because of the small area between the boulders. The STPs were excavated in north/south and east/west lines along a grid established for the locus. Three STPs were placed at 5m intervals along the north/south axis because of the small area. Along the east/west axis, 3 STPs were placed at 10m intervals and one at the 15m interval to avoid a large granite outcrop. The STPs served to define the boundaries of a subsurface deposit that is approximately 12 m north/south by 37 m east/west, and covers an area of approximately 400 square meters when its shape is considered (See Figure 5)

Four of the seven STPs excavated at Locus B were positive as indicated in Table 16. A total of 21 artifacts were recovered from STP excavation. The artifacts were dominated by lithic debitage which made up more than 57 percent of the cultural material recovered but ceramics were relatively abundant. Artifacts recovered from the STPs include 2 pieces of angular waste, 10 flakes and 9 pieces of pottery. Table 16 indicates that STP 5S/0E was by far the most productive STP. This STP reached a depth of 50 cm before encountering decomposed granite subsoil. Cultural material was encountered throughout the upper 40 cm of the STP suggesting that an approximately 40 cm deep cultural deposit was present in this area. The three other positive STPs at this locus only recovered a single artifact each. This suggests that subsurface deposits with a meaningful data set are very concentrated within a small area of the locus.

The concentration of surface artifacts also generally corresponds to the positive STPs distribution (See Figure 5). The northeastern portion of the locus has a sparse surface artifact scatter and only has a limited subsurface deposit.

Table 16. CA-SDI-18321 Locus B STP Results by Provenience

Artifact Type	STP 0N/0E	STP 0N/20E	STP 5S/0E	STP 0N/10W	Total	Percent
Angular Waste	0	0	2	0	2	9.5
Flake	1	1	7	1	10	47.6
Pottery	0	0	9	0	9	42.9
Total Count	1	1	18	1	21	
Percent	4.8	4.8	85.7	4.8		100.0
Bone	0.0	0.0	1.0	0.0	1.0	0.2
Fire Affected Rock	0.0	325.5	64.8	81.8	472.1	99.8
Total Weight (g)	0.0	325.5	65.8	81.8	473.1	
Percent	0.0	68.8	13.9	17.3		100.0

Table 17 indicates that STP depths ranged between 10cm-40cm. The majority of artifacts were recovered from the 10-20 cm level with smaller amounts present both above and below. Only fire-affected rock was recovered from the 30-40 cm level.

Table 17. CA-SDI-18321 Locus B STP Results by Depth

Artifact	0-10 cm	10-20 cm	20-30 cm	30-40 cm	Total	Percent
Angular Waste	1	1	0	0	2	9.5
Flake	2	3	5	0	10	47.6
Pottery	0	9	0	0	9	42.9
Total Count	3	13	5	0	21	
Percent	14.3	61.9	23.8	0.0		100.0
Bone	0.3	0.1	0.6	0.0	1.0	0.2
Fire Affected Rock	407.3	0.0	0.0	64.8	472.1	100.0
Total Weight (g)	407.6	0.1	0.6	64.8	473.1	
Percent	86.2	0.0	0.1	13.7	100.0	100.2

The concentration of surface and subsurface artifacts at this locus warranted the excavation of a test unit to better evaluate the integrity and content of the subsurface deposit. A single 1 by 1 m excavation unit (Unit 1) was excavated near STP 5S/0E to assess the subsurface deposit in this locus. The unit was placed near the STP with the combined highest subsurface artifact yield and the greatest soil depth. Table 18 indicates that cultural material was present throughout the 60 cm depth of the unit.

Table 18. CA-SDI-18321 Locus B Unit Summary by Depth

Artifact	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	50-60 cm	Total	Percent
Angular Waste	13	4	1	5	10	5	38	31.9
Flake	15	15	20	5	2	0	57	47.9
Mano	2	0	0	0	0	1	3	2.5
Metate	0	1	0	1	1	0	3	2.5
Hammerstone	0	1	0	1	0	0	2	1.7
Core	0	0	0	1	0	0	1	0.8
Pottery	2	3	9	1	0	0	15	12.6
Total Count	32	24	30	14	13	6	119	
Percent	26.9	20.2	25.2	11.8	10.9	5.0		100.0
Bone	23.8	1.0	2.1	1.2	1.0	0.3	29.1	2.2
Fire-Affected Rock	81.1	655.7	50.8	391.5	103.4	56.3	1282.5	97.8
Total Weight (g)	104.9	656.7	52.9	392.7	104.4	56.6	1311.6	
Percent	8.0	50.1	4.0	29.9	8.0	4.3		100.0

* One additional pottery fragment was recovered from a wall fall.

A total of 119 artifacts were recovered from the unit. Artifacts included 38 pieces of angular waste, 57 flakes, 3 mano fragments, 3 metate fragments, 2 hammerstones, 1 core, and 15 pieces of pottery. Artifact counts were highest in the upper 30 cm of the deposit with a steady decline with depth from there. There were no intrusive materials and limited bioturbation within the unit, indicating that the soil has fair integrity. Ceramics were recovered from throughout the main portion of the deposit and there is no reason to expect that the locus is multicomponent in nature.

Artifact Analysis

Testing at Locus B did not recovery any time-diagnostic tools. No projectile points were recovered and no flaked lithic artifacts of any kind were recovered. The presence of lithic debitage at this locus suggests that these types of tools were manufactured here, but the limited sample size and perhaps their limited presence at the locus failed to recover them. The cultural material that was recovered during testing is described in greater detail below.

Core

A single milky quartz core (SDI-18321-335) was recovered during the testing program at Locus B. The core was recovered from 30-40 cm level of Unit 1. Flaking was multidirectional with no clear reduction pattern evident. Some natural internal fracturing is present, but the stone quality over all appears to be good. The core is similar to, though more intensively used, than the core from Locus A.

Hammerstones

A total of four hammerstones, two from the surface (SDI-18321-95 and SDI-18321-105) and two from Unit 1 (SDI-18321-309 and SDI-18321-346), were recovered from Locus B. Two of the hammerstones are complete and the other two are small fragments. One complete hammerstone (SDI-18321-95) was recovered from the surface. It is a well-rounded milky quartz cobble that has battering on one end. The artifact shows slight fire alternation that may be related to natural brushfires. The second whole hammerstone (SDI-18321-309) was recovered from the 10-20 cm level of Unit 1. It is made from an unrounded fragment of dark gray quartzite from the Julian Schist Formation. Battering on this tool is very extensive with both ends rounded by extensive battering in addition to battering along one edge. The tool was extensively used for pounding tasks.

The first fragmented hammerstone (SDI-18321-105) appears to be an aplite cobble from the surface and has only a small amount of battering on one edge. One portion of the fragment also appears very smooth and could have been used as a mano, or may represent the edge of the source dike. The second hammerstone fragment (SDI-18321-346) is another piece of Julian Schist quartzite material that has battering and crushing on one end. It was recovered from the 30-40 cm level of Unit 1. Both fragments appear to have been flaked off or broken during use.

Debitage

Debitage represents the largest amount of cultural material recovered from Locus B. Debitage represents nearly 72% of the artifacts recovered, indicating that one of the major activities at this locus was tool production and/or finishing.

Similar to Locus A, the assemblage was dominated by varieties of milky and clear quartz (33%) (Table 19). Milky quartz made up almost 24% of the debitage and clear or crystalline quartz made up approximately 10%. Again this would be expected as it is the most locally available material. Again, intensive use of quartz use has often been associated with the Late Prehistoric period.

The next most abundant debitage material was obsidian (28%). This is in sharp contrast to Locus A where no obsidian was present. The abundance of obsidian is unusual and may reflect the effect of a few reduction activities on a small overall sample. Several of the fragments are large enough to source and may be sent in for further analysis. The obsidian most likely came from Obsidian Butte in Imperial Valley. This source is approximately 75 miles directly east of the project area and the abundance of this material so far from the source is again, unusual. The obsidian includes small quartz phenocrysts characteristic of the Obsidian Butte source. Translucency varies among the debitage, suggesting that more than one core might be represented.

Table 19. CA-SDI-18321 Locus B Debitage Materials

Lithic Type	Clear Quartz	Milky Quartz	Quartzite	Aph. SPV	Porph. SPV	Lusardi Formation Volcanic	Granitic	Gabbroic	Cobble Volcanic	Obsidian	Total	Percent
Angular Waste	6	14	3	4	0	0	2	0	0	14	43	36.8
Interior	5	6	6	2	1	0	7	1	0	32	60	51.3
Primary	0	0	1	0	0	0	0	0	1	0	2	1.7
Secondary	0	1	4	2	0	0	1	0	2	2	12	10.3
Total	11	21	14	8	1	0	10	1	3	48	117	
Percent	9.4	17.9	12.0	6.8	0.9	0	8.5	0.9	2.6	41.0		100.0

The next most abundant debitage material was Santiago Peak Volcanic, most of which was black in color. This material made up approximately 17 percent of the assemblage and suggests either direct procurement or low level exchange to the west.

Quartzite material also made up a fair percentage of the lithic material from Locus B (17.3%). The assemblage includes both quartzites derived from Eocene cobbles and quartzites from the Julian Schist Formation. Most of the quartzite, however, appears to be from sources to the east in the Julian Schist. Three fragments of Eocene cobble volcanic material were present in the debitage assemblage that are derived from the Ballena gravels.

A single small fragment of Lusardi Formation Volcanic material (SDI-18321-111) was recovered from the surface of this locus. This fragment shows the characteristic banding.

The vast majority of the debitage (84%) lacked cortex. This probably reflects the use of quartz dike sources which lack cortex, obsidian cores that face initial reduction at the quarry, and the distance to sources of other materials such as the Santiago Peak Volcanics. The debitage at this locus reflects pressure and core reduction technology dominated by interior thinning and pressure flakes. No large bifacial thinning flakes were present and the assemblage is largely characteristic of flake reduction for the production of arrow points and expedient tools. Overall the debitage assemblage reflects technological indicators suggesting that the locus is a single component Late Prehistoric assemblage.

Groundstone

Groundstone artifacts were the most abundant tools at Locus B indicating the importance of seed processing at this activity area (Table 20). A total of 5 mano fragments, 3 metate fragments, and 1 complete pestle were recovered during testing in addition to the bedrock milling features at this locus. Three of the manos were recovered from Unit 1, two from level 0-10cm (SDI-18321-306 and SDI-18321-307), one from level 50-60cm (SDI-18321-360), and two were recovered during the surface collection (SDI-18321-78 and SDI-18321-80). Four of the manos are made from well-rounded porphyritic volcanic cobbles. The remaining mano fragment is made from a granitic cobble. All the mano fragments are relatively small and accurate information on siding and pecking is not available.

The three metate fragments (SDI-18321-274, SDI-18321-275, and SDI-18321-310) recovered during testing are all granitic and were all recovered from various levels of Unit 1. Only one of the metate fragments is fire-affected. One large metate fragment (SDI-18321-274) is nearly complete and appears to have been shaped into an oval. All of the metate fragments appear to represent portions of slab metates.

The single pestle (SDI-18321-81) was recovered from the surface near the one milling feature with a mortar. These two items are probably associated. The pestle is made from an elongated porphyritic volcanic cobble from the Ballena Gravels. It shows grinding use on one end and possible use as a mano on one side. The end grinding has a small amount of shouldering. The presence of these groundstone artifacts and the milling features in the area indicates that seed processing was a large component of the activities at this locus.

Pottery

Thirty-two fragments of Tizon Brown Ware pottery were recovered during testing at Locus B. All of the ceramics are body sherds. The sherd assemblage is much less variable than that of Locus A. Sherd inclusions suggest that all of the assemblage could have come from granitic terrain sediments and contain granitic inclusions. The quantities and types of inclusions are variable, however, suggesting the sherd assemblage represents multiple vessel fragments. Pottery is directly associated with the Late Prehistoric period and shows the use of storage and/or cooking containers at the locus. It was recovered throughout the deposit, suggesting the locus represents a single component.

Table 20. CA-SDI-18321 Locus B Groundstone Tool Attributes

Cat#	Location	Level	Type	Material	Length (mm)	Width (mm)	Thickness (mm)	Count	Weight (g)
SDI-18321-78	#86	Surface	Mano	Cobble Volcanic	27.64+	13.64+	28.46+	1	7.1
SDI-18321-80	#87	Surface	Mano	Cobble Volcanic	71.46+	24.46+	17.41+	1	39.8
SDI-18321-81	#88	Surface	Pestle	Cobble Volcanic	270	127.04	99.9	1	1994
SDI-18321-274	Unit 1	30-40cm	Metate	Granitic	230	170	94.07	1	4549
SDI-18321-275	Unit 1	40-50cm	Metate	Granitic	147.37+	101.66+	98.23+	1	1275
SDI-18321-310	Unit 1	10-20cm	Metate	Granitic	33.17+	12.02+	1.61+	1	34.3
SDI-18321-306	Unit 1	0-10cm	Mano	Cobble Volcanic	43.6+	23.93	27.31	1	32.2
SDI-18321-307	Unit 1	0-10cm	Mano	Cobble Volcanic	48.47+	26.87+	18.16	1	32.2
SDI-18321-360	Unit 1	50-60cm	Mano	Granitic	27.09+	25.48+	10.44+	1	4.6

Faunal Bone

A total of 30.6 grams of bone were recovered during testing. The material included 29.4 grams from Unit 1, 0.2 grams from the surface and 1.0 grams from the STPs. Approximately 60% of the recovered bone was burned and appears to be culturally associated animal bone and not representative of natural animal death. A few of the cultural bones were calcined and it is likely that these specimens were discarded in a fire hearth.

Most of the faunal bone assemblage is unidentifiable to the species level, but it is dominated by small and medium-size mammal. Rabbit and pocket gopher are the only identifiable animals in the assemblage, only one large mammal bone that probably represents deer was present. No human remains were recovered during testing at this locus.

Fire-Affected Rock

The majority of fire-affected rock (approximately 60%) was recovered from the surface, 31% within the 10-20cm and 30-40 cm levels of Unit 1, and approximately 8.5% from the STPs. The material was scattered both on the surface and within the unit and does not represent any clear hearth or related feature. The fire-affected rock distribution does correspond with the artifact distribution, indicating that it is cultural. Most of the fire-affected rock is composed of locally available sub-rounded granitic rock fragments that could have been collected nearby.

4.3.3 CA-SDI-18321 Locus C

Structure and Soils

Site CA-SDI-18321 Locus C is a very small and apparently short-term temporary camp. It is located on the eastern side of a higher ridgeline to the northwest of Locus A (See Figure 5). A small drainage separates the two loci, so they are geographically distinct. Locus C contains no associated bedrock milling and was heavily disturbed by previous brushing for road construction and percolation tests. It is further away from the main drainage than either Locus A or Locus B.

Soils at Locus C were partially scraped and disturbed by several bulldozer swaths through the area. Soils were generally a light brown silty sand with decomposed granite (DG) over a light brown to yellow sand with DG. Organic material was very limited, indicating a lack of a midden deposit or any other soil accumulation. Soils were shallow and only reached 40 cm in one STP. The soils at Locus C appear to represent natural soil stratigraphic development. Only the removal of some of the “A” horizon during brushing appears to have disturbed the integrity of the area.

Testing Results

Testing at Locus C included surface collection and the excavation of 5 STPs to determine if subsurface cultural deposits were present. As indicated in Table 21, surface collection resulted in a relatively sparse recovery of eight items, composed of debitage and groundstone. No ceramics or other chronologically diagnostic items were recovered. The surface artifacts were concentrated in a relatively open and flat area, although it was somewhat disturbed and surface artifact provenience may not be entirely accurate due to the disturbance.

Table 21. CA-SDI-18321 Locus C Surface Collection Results

Catalogue Number	Location	Type
SDI-18321-1	#1	Discard
SDI-18321-2	#2	Fire-affected Rock
SDI-18321-3	#3	Mano
SDI-18321-4	#4	Flake
SDI-18321-5	#5	Pestle/Mano
SDI-18321-6	#6	Flake
SDI-18321-7	#7	Flake
SDI-18321-8	#8	Flake
SDI-18321-9	#9	Flake

As indicated in Table 22, surface artifacts dominated the assemblage and only one mano fragment and one piece of angular waste were recovered from the STPs. Surface artifacts included 5 flakes, 1 mano fragment, and one combination pestle/mano. The surface artifact distribution indicated that Locus C covers an area approximately 22 m north/south by 22 m east/west.

Table 22. CA-SDI-18321 Locus C Cultural Material by Provenience

Material	Surface	STP 10S/0E	Total	Percent
Angular Waste	0	1	1	10.0
Flakes	5	0	5	50.0
Mano	2	1	3	30.0
Pestle/Mano	1	0	1	10.0
Total Count	8	2	10	
Percent	80.0	20.0		100.0
Fire-Affected Rock	318.0	0.0	318.0	100.0
Total Weight (g)	318.0	0.0	318.0	
Percent	100.0	0.0		100.0

The datum was established in roughly the center of the locus, and a series of 6 STPs were placed in cardinal directions at 10 m intervals, while one STP was excavated at the datum. Avoiding previous disturbance required the adjustment of one of the STPs to 11 m. Several dirt berms situated on a north/south axis traversed the area indicating the whole area has been disturbed. Most of the soil in the area has either eroded or been pushed away making it impossible to avoid placing STPs in undisturbed areas. The STPs ranged between 10 and 20 cm in depth depending on the location of the STP.

As indicated in Table 22, two items were recovered from STP 10S/0E. These include a single mano fragment from the 0-10 cm level and 1 piece of angular waste. These may be the result of previous disturbance in the area, and the testing results at Locus C indicate that a meaningful subsurface deposit is not present at this locus. No further subsurface excavation was conducted. The area to the south of this STP dropped off precipitously to the drainage.

Artifact Analysis

Debitage

Similar to Locus A and B,debitage represents the largest amount of artifacts recovered at Locus C. A total of six flakes were recovered, one from the STPs and five from the surface collection. Debitage represents 66% of the total artifact assemblage from Locus C. One of the flakes from the surface was cobble volcanic (SDI-18321-7), while the remainder of thedebitage from the locus consisted of clear and milky quartz. The quartz may reflect a single flaking event or two and suggests late stage, soft hammer reduction.

Groundstone

Two mano fragments (SDI-18321-3 and SDI-18321-375) and one pestle/mano (SDI-18321-5) were recovered during testing at Locus C. Two of the manos were recovered from the surface and one was recovered from STP 10S/0E. The pestle/mano was recovered from the surface. All three groundstone artifacts are porphyritic cobble volcanic material. Both manos appear fire-affected and one may have some crushing and battering on one end. This mano fragment (SDI-18321-375) is unifacial without pecking. The other mano fragment is too small to determine the number of faces used. The pestle/mano is whole and has battering on both ends. It is made from an elongated volcanic cobble similar to the pestle from Locus B. The pestle has use-wear on at least one side. The presence of these groundstone artifacts indicates that seed processing was a component of the activities at this locus even without the presence of bedrock milling.

Fire-Affected Rock

Only one piece of fire-affected rock was recovered from the surface. The fragment does not appear to be associated with any intact feature. The fire-affected rock was a locally available sub-rounded granitic rock fragment that could have been collected nearby. The presence of fire-affected rock and fire-affected tools suggests that cooking or heating were part of the activities at this locus

4.3.4 CA-SDI-18321 Locus D

Structure and Soils

Site CA-SDI-18321 Locus D is another very small and apparently short-term temporary camp similar in many ways to Locus C but differing in content. It is located on a relatively flat terrace area northeast of Locus A. As indicated in Figure 5, the artifacts in Locus D represent a distinct concentration justifying the separation of this locus from Locus A. The main seasonal drainage through the area is located east and south of the locus at the base of the terrace.

The area of Locus D is partially brushed. Two swaths cleared by a bulldozer pass through the locus. Artifacts are present in both these disturbed areas and in the adjacent dense, chamise-dominated chaparral. Due to the brushing, integrity at this locus is only fair.

Soils at Locus D were light brown silty sand over DG. Soils averaged approximately 30 cm in depth and contained very little organic material, except in the layer of surface leaf duff. This indicates a lack of a midden deposit or any other soil accumulation. The soils at Locus D appear to represent natural soil stratigraphic development except where brushing has occurred.

Testing Results

Testing at Locus D included surface collection and the excavation of 6 STPs to determine if subsurface cultural deposits were present. As indicated in Table 23, surface collection resulted in a relatively sparse recovery of 14 items. Unlike the other loci of the site, the surface of this locus is dominated by ceramics. This suggests Late Prehistoric use, but no other chronologically diagnostic items are present. Other surface artifacts included 2 flakes, 1 core and 1 possible hammerstone, 2 mano fragments, and 1 fire-affected rock. The surface artifacts were concentrated in a relatively flat area, although it was somewhat disturbed.

Table 23. CA-SDI-18321 Locus D Surface Collection Results

Catalogue Number	Location	Type
SDI-18321-19	#19	Core
SDI-18321-18	#18	Flake
SDI-18321-21	#21	Flake
SDI-18321-14	#14	Mano
SDI-18321-15	#15	Fire-affected Rock
SDI-18321-23	#23	Mano
SDI-18321-22	#22	Hammerstone
SDI-18321-10	#10	Tizon Brown Ware
SDI-18321-11	#11	Tizon Brown Ware
SDI-18321-12	#12	Tizon Brown Ware
SDI-18321-13	#13	Tizon Brown Ware
SDI-18321-16	#16	Tizon Brown Ware
SDI-18321-17	#17	Tizon Brown Ware
SDI-18321-20	#20	Tizon Brown Ware

Surface artifacts dominated the assemblage and only one flake was recovered from the STPs. The surface artifact distribution indicated that Locus D covers an area approximately 16 m north/south by 9 m east/west.

The datum was established in roughly the center of the locus, and a series of 6 STPs were placed in cardinal directions at 10 m intervals, while one STP was excavated 20 m west to help establish a gap between the loci. The STPs were all excavated to a maximum depth of 30 cm.

All of the STPs were negative except for STP 0N/0E, which contained a single piece of angular waste in the 0-10 cm level. This may be the result of previous disturbance in the area and the testing results at Locus D indicate that a meaningful subsurface deposit is not present at this locus. No further subsurface excavation was conducted.

Artifact Analysis

Core

A quartzite core (SDI-18321-19) was recovered during the surface collection of Locus D. The core is made from an Eocene quartzite cobble from the Ballena Gravels. The fragment shows some rounded cortex, but also has plainer breaks along tabular fractures. These angular edges appear to have been used as platforms for reduction. The artifact as a whole is relatively small and it appears that useful flake removals were not achieved before it was discarded. Flaking is multidirectional, but many of the flakes resulted in step fracturing.

Hammerstone

A single possible hammerstone was recovered from the surface of the locus (SDI-18321-22). This represents an Eocene porphyritic volcanic cobble fragment that has been weathered and fire-affected. On one corner of the artifact the fire altered surface is absent and what may be crushing or possibly weathering is present. The cultural nature of this tool is uncertain, but it at least represents a fire-affected rock.

Debitage

Only three fragments ofdebitage were recovered from Locus D and all three represent flakes from different cores. This suggests the limited importance of tool production at this locus. The two flakes recovered from the surface (SDI-18321-18 and SDI-18321-21) are both porphyritic Santiago Peak Volcanic material. One shows the cortex of a subrounded cobble, and both differ in color and texture indicating they are from different cores. The third flake (SDI-18321-376), recovered from the 0-10 cm level of STP 0N/0E, is made of milky quartz. All three flakes appear to represent core reduction and the two volcanic flakes are moderately patinated.

Groundstone

One mano (SDI-18321-14) and one mano fragment (SDI-18321-23) were recovered from the surface of Locus D. The complete mano is a small oval granitic cobble that shows unifacial grinding, but no pecking. The other side of the artifact has been subjected to surface weathering, but appears not to have been used. The mano fragment is a porphyritic volcanic cobble and shows limited use on the small surface remaining. The limited presence of groundstone artifacts at this locus without bedrock milling suggests short-term temporary camp use with portable metates.

Pottery

Ten fragments of Tizon Brown Ware pottery were recovered during testing of Locus D. All of the fragments were body sherds which show use of residual clays with granitic inclusions typical of the Native American pottery produced in western San Diego County. All of the pieces have similar granitic inclusions and clay content, color, wall thickness, texture, and shape suggesting they may all belong to the same vessel. It is likely that the ceramics at Locus D represent a portion of a single pot drop. Pottery is directly associated with the Late Prehistoric period and shows the use of storage and or cooking containers at the site.

Fire-Affected Rock

Only one piece of fire-affected rock was recovered from the surface. The fragment does not appear to be associated with any intact feature. The fire-affected rock was a porphyritic volcanic cobble fragment. The presence of fire-affected rock and fire-affected tools suggests that cooking or heating were part of the activities at this locus

4.3.5 CA-SDI-18322

Site Structure and Soils

Site CA-SDI-18322 appears to represent the remains of a temporary camp with an associated bedrock milling feature (Figure 10). As indicated in Figure 11, the site is on a steep slope and perched above a cut. As shown in Figure 10, the site is located at the top of this man-made cut in a small level area. As discussed in the survey results, this site appears to be the remains of a larger prehistoric camp that extended west of a ridgeline that has since been graded away. What appears to only represent a small portion of the site remains at the top of the cut slope, although artifacts have washed to the base of the cut.

A large granitic boulder is present on the northeastern side of the remaining site and the cut is present to the west. To the north and southeast only a small, relatively level area remains on the steeper slope. It appears that during the cutting of the slope, some bulldozing activity extended into the remaining site area. A small push pile is present on the southwestern side of the site and other evidence of surface disturbance and soil pushing is present.

Despite this disturbance, the portion of the site that remains appears to have some integrity because the disturbed soils appear to have been placed on top the cultural material, inadvertently capping it. The first 10-15 cm of soil is a disturbed loose, poorly sorted dark brown silty sand. In STP 0N/0S, a large clump of dry grass was observed at the 8cm level, indicating the soil had been placed there fairly recently. The soil underneath this disturbed layer appeared relatively undisturbed.

Figure 10

CA-SDI-18322 Site Map

(Confidential figure located in Appendix G)



CA-SDI-18322 Overview, view to E

Figure 11
CA-SDI-18322 Site Overview Photograph

Soils at CA-SDI-18322 were relatively complex due to the presence of fill in portions of the site. All of the STPs indicated a relatively deep soil deposit. The shallowest STP encountered granitic bedrock at 40 cm while others encountered DG at 50 cm. One STP (15S/0N) extended to a depth of 80 cm partially due to the addition of a fill cap. The fill cap ranged from loose loamy sandy clay to mixed DG with sandy loam. This was underlain with what appeared to be intact, more compact, brown sandy loam. This was followed by a basal layer of DG. One of the STPs (5S/0E) was located in what appeared to be a push pile related to the brushing.

Figure 12 provides the soil profile from Unit 1 at CA-SDI-18322. Soil depth reached 100 cm below ground surface. The upper roughly 10 cm represented a disturbed layer of soil that appeared to cap intact deposits. The deposits were relatively homogenous very dark grayish-brown (10YR 3/2) poorly sorted silty sandy loam. Organic content was relatively high, suggesting a cultural midden deposit. In Unit 1, this cultural deposit was underlain by a granitic bedrock boulder that first appeared near the 30 cm level and generally extended to the 75 cm level. The southwest corner of the unit lacked the bedrock boulder and extended down to subsoil and native rock at the 100 cm level.

Testing Results

Testing at site CA-SDI-18322 included recordation of bedrock milling, mapping and surface collection, and the excavation of 5 STPs and 1 test unit to assess the content and integrity of subsurface cultural deposits.

Bedrock milling at CA-SDI-18322 included a single feature located in the relatively level site area (See Figure 10). This feature was nearly at ground level, but showed relatively heavy use. Milling on feature A included 5 basins, 2 mortars, and one large slick that covered most of the surface of the rock and connected most of the element. Use of the feature was fairly intensive with a mortar depth that reached 4.2 cm. Most of the elements were well-used and in good condition.

As indicated on Figure 10, the surface artifact scatter is concentrated on the remaining level portion of the site. An additional surface scatter of material appears to be eroding out of the cut bank and has fallen to the base of the cut where it lacks any integrity.

The surface collection results are provided in Table 24. A total of 20 surface collection points were mapped, resulting in the recovery of 11 artifacts in addition to bone and fire-affected rock. Table 25 indicates that the surface collection includes 8 fire-affected rocks, 2 flakes, 4 pottery sherds, 4 mano fragments and 1 metate fragment. The exact provenience of surface artifacts may be affected by the previous disturbance to the surface of the site.

Debitage made up a relatively small percent of the surface artifacts, while other artifact classes such as groundstone tools and ceramics, were well-represented. As at portions of site CA-SDI-18321, the presence of ceramics in the surface assemblage suggests that this site was occupied during the Late Prehistoric period. Small amounts of animal bone and fire-affected rock indicated that food cooking and preparation also occurred at this locus indicating its use as a temporary camp.

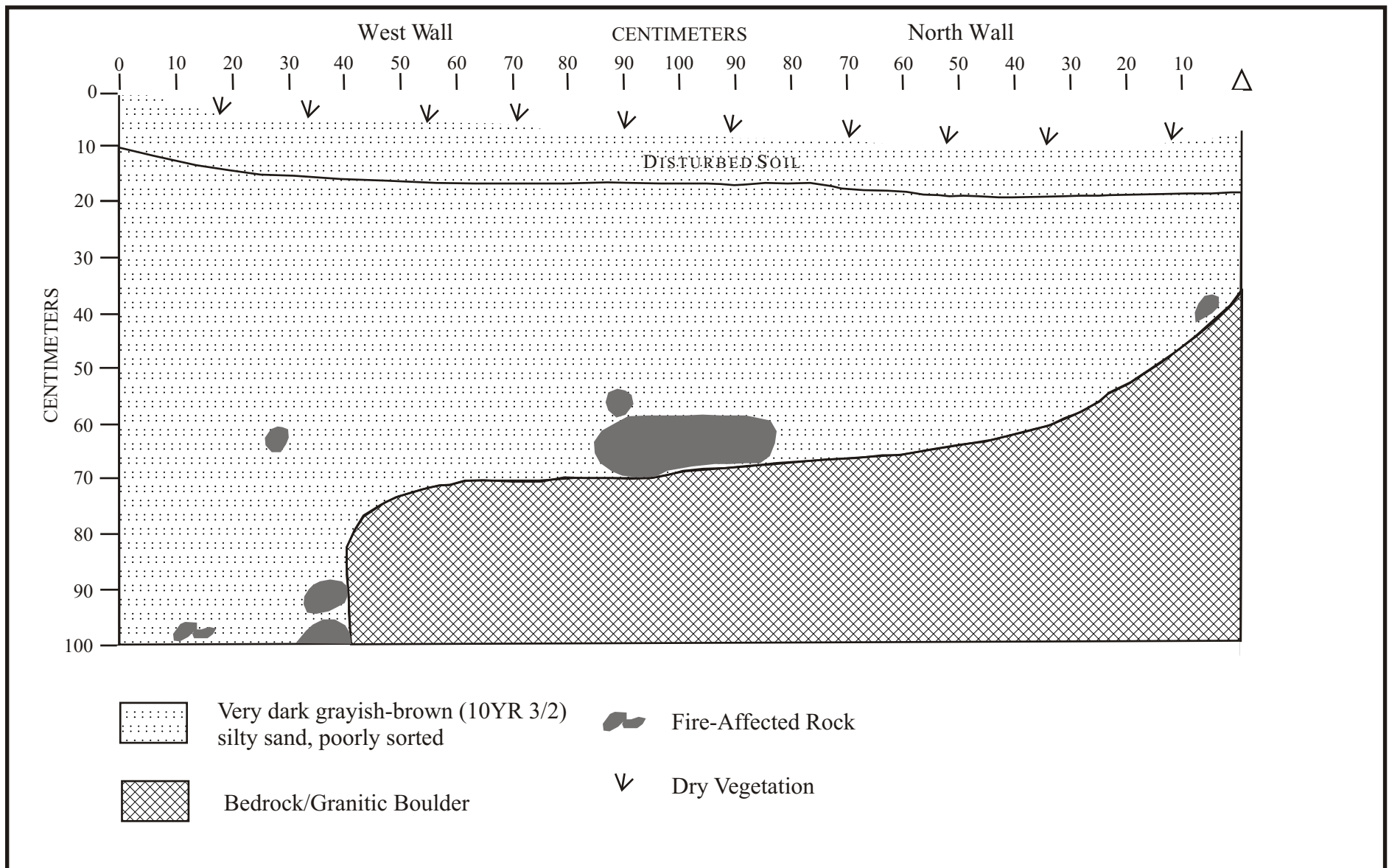


Figure 12
CA-SDI-18322
Unit Profile



Table 24. CA-SDI-18322 Surface Collection Results

Catalogue Number	Location	Artifact Type
SDI-18322-1	Shot# 69	Fire-affected Rock
SDI-18322-2	Shot# 70	Metate
SDI-18322-3	Shot# 71	Fire-affected Rock
SDI-18322-4	Shot# 72	DISCARD
SDI-18322-5	Shot# 73	Flake
SDI-18322-6	Shot# 74	Tizon Brown Ware
SDI-18322-7	Shot# 75	Fire-affected Rock
SDI-18322-8	Shot# 75	Mano
SDI-18322-9	Shot# 75	Mano
SDI-18322-10	Shot# 76	Mano
SDI-18322-11	Shot#77	Fire-affected Rock
SDI-18322-12	Shot# 78	Fire-affected Rock
SDI-18322-13	Shot# 79	Flake
SDI-18322-14	Shot# 80	Tizon Brown Ware
SDI-18322-15	Shot# 81	Fire-affected Rock
SDI-18322-16	Shot# 83	Tizon
SDI-18322-17	Shot# 81	Tizon Brown Ware
SDI-18322-18	Shot# 83	Fire-affected Rock
SDI-18322-19	Shot# 84	Mano
SDI-18322-20	Shot# 85	Fire-affected Rock

Based on the feature and surface artifact distribution excluding the secondary material at the base of the slope, the remaining portion of the site is approximately 19 meters north/south by 16 meters east/west.

Table 25 indicates that a total of 256 artifacts and more than 7,202.1 grams of ecofacts were recovered during the testing program at CA-SDI-18322. Approximately 82 percent of this material was recovered from the test unit, while surface collection only resulted in the recovery of 4.3 percent of the artifacts. This may be an additional indication that portions of the surface have been covered during disturbance activities. The STP testing resulted in the recovery of 13.7 percent of the artifacts. The artifact abundance in the test unit also suggests that cultural material is highly concentrated within a single remaining portion of the site.

Table 25. CA-SDI-18322 Cultural Material by Provenience

Artifact Type	Surface	STPs	Unit	Total	Percent
Angular Waste	0	5	54	59	23.0
Flakes	2	9	28	39	15.2
Projectile Point	0	0	1	1	0.4
Biface	0	0	1	1	0.4
Flake Tool	0	0	1	1	0.4
Shell Beads	0	0	9	9	3.5
Crystal	0	0	1	1	0.4
Mano	4	4	3	11	4.3
Metate	1	0	0	1	0.4
Pottery	4	17	112	133	52.0
Total Count	11	35	210	256	100.0
Percent	4.3	13.7	82.0		100.0
Faunal Bone	0.0	3.1	21.6	24.7	0.3
Shell	0.0	0.0	0.4	0.4	0.0
Charcoal	0.0	0.0	0.3	0.3	0.0
Fire-Affected Rock	1653.1	4349.0	1174.6	7176.7	99.6
Total Weight (g)	1653.1	4352.1	1196.9	7202.1	
Percent	23.0	60.4	16.6		100.0

Testing results were dominated by the recovery of ceramics, which made up approximately 52 percent of the material recovered. This material was followed by flaked lithic debitage which made up approximately 38 percent of the assemblage. Other artifact categories were relatively minor in terms of percentages.

For CA-SDI-18322, a series of five STPs were placed in 5 or 10 m increments in the cardinal directions. The site is located on a small ridgeline, limiting the placement of the STPs in both distance and direction.

As indicated in Table 26, all of the STPs were positive and ranged in depth from 30cm to 80cm. STPs 0N/0E and STP 5.5W/0N contained both the greatest amount of artifacts and some of the highest integrity. STP 5.5W/0N was the deepest and most productive, with 17 artifacts including groundstone tools and pottery, in addition to lithic debitage. This STP was abandoned at a depth of 80 cm, although artifacts were still present. It was necessary to terminate this STP because it was no longer physically possible to excavate it.

Table 26. CA-SDI-18322 STP Results by Provenience

Material	STP 0N/0E	STP 0N/5.5W	STP 0N/5E	STP 10N/1W	STP 0N/5E	Total	Percent
Angular Waste	0	4	1	0	0	5	14.3
Flakes	5	3	0	0	1	9	25.7
Mano Fragments	1	3	0	0	0	4	11.4
Pottery	6	7	2	1	1	17	48.6
Total Count	12	17	3	1	2	35	
Percent	34.3	48.6	8.6	2.9	5.7		100.0
Faunal Bone	0.8	1.6	0.3	0.4	0.0	3.1	0.1
Fire-affected Rock	433.8	3769.1	146.1	0.0	0.0	4349.0	99.9
Total Weight (g)	434.6	3770.7	146.4	0.4	0.0	4352.1	
Percent	10.0	86.6	3.4	0.0	0.0		100.0

STPs 0N/5E, 10N/1W, and 0N/5E all produced relatively small amounts of cultural material. This indicates that the dense subsurface deposit is very limited in area and does not extend far away from the datum to the north or east. The STPs defined a subsurface deposit that is approximately 19 m north/south by 9 m east/west and covers an approximately 171 square m area. Table 26 indicates the result of all the STPs includes the recovery of 5 pieces of angular waste, 9 flakes, 4 mano fragments, and 17 pieces of Tizon Brown Ware pottery.

Table 27 indicates that the STPs identified a subsurface deposit that is at least 80 cm deep. The STPs ranged between 30 and 80 cm in depth depending on the location of the STP. The majority of the cultural material from the STPs was recovered between the 10 and 40 cm levels with a peak in the 20-30 cm level. The limited amount of cultural material in the 0-10 cm level may again reflect capping with fill, and the 10-20 cm level might better reflect the original surface. For some reason, no artifacts were recovered from the 40-50 cm level. This may be the results of such a small sample size.

Because the STPs indicated that there was a subsurface component, a test unit (Unit 1) was excavated to better evaluate the integrity and content of the subsurface deposit. The unit was placed near the STP 0N/0E because of space constraints. Normally, the unit would have been placed next to the STP with the greatest artifact count and soil depth (STP 5.5W/0N) but this was located on the very edge of the ridge where a unit could not be placed.

Table 27. CA-SDI-18322 STP Results by Depth

Artifact Type	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	50-60 cm	60-70 cm	70-80 cm	Total	Percent
Angular Waste	0	0	0	3	0	2	0	0	5	14.3
Flakes	2	0	3	0	0	3	0	1	9	25.7
Mano	0	0	2	1	0	0	1	0	4	11.4
Pottery	1	7	6	2	0	0	1	0	17	48.6
Total Count	3	7	11	6	0	5	2	1	35	
Percent	8.6	20.0	31.4	17.1	0.0	14.3	5.7	2.9		100.0
Faunal Bone	0.0	0.4	0.1	0.8	0.2	1.1	0.5	0.0	3.1	0.1
Fire-affected Rock	0.0	0.0	2295.6	752.2	929.1	372.1	0.0	0.0	4349.0	99.9
Total Weight (g)	0.0	0.4	2295.7	753.0	929.3	373.2	0.5	0.0	4352.1	
Percent	0.0	0.0	52.7	17.3	21.4	8.6	0.0	0.0		100.0

Table 28 indicates that cultural material was present throughout the unit to a depth of 100 cm. Artifact counts included a total of 256 artifacts. Artifact counts were highest in the 20-40 cm levels and again at the 60-70 cm level. Within the first 10 cm there was evidence that the soil had been placed there fairly recently (See above site structure and soil section). Below the 10cm level, there was no intrusive material and limited bioturbation, indicating that the soil has fair integrity. The unit terminated at 100 cm due to a soil change and the presence of a granite rock in approximately one-half of the unit.

The artifacts recovered from Unit 1 include 1 quartz projectile point, 1 biface fragment, 1 unifacial flake tool, 1 core, 54 pieces of angular waste, 28 flakes, 3 mano fragments, and 112 pieces of pottery (See Table 28). The abundance and presence of ceramics throughout the deposit suggest this locus is a single component Late Prehistoric site. The abundance of ceramics in relation to lithic debitage in this site is unusual and suggests a particular focus of activity away from tool production.

Table 28. CA-SDI-18322 Unit Summary by Depth

Artifact Type	0-10 cm	10-20 cm	20-30 cm	30-40 cm	40-50 cm	50-60 cm	60-70 cm	70-80 cm	80-90 cm	90-100 cm	Wall Fall	Total	Percent
Angular Waste	2	6	7	11	9	5	6	3	5	0	0	54	25.6
Shell Beads	0	0	1	1	1	2	5	0	0	0	0	10	4.7
Biface	0	0	0	0	0	0	1	0	0	0	0	1	0.5
Crystal	0	1	0	0	0	0	0	0	0	0	0	1	0.5
Flakes	1	2	6	7	3	2	2	2	1	0	2	28	13.3
Mano Fragments	1	0	1	0	0	0	0	0	0	1	0	3	1.4
Projectile Point	1	0	0	0	0	0	0	0	0	0	0	1	0.5
Pottery	8	10	14	47	5	6	11	2	0	4	5	112	53.1
Unifacial	0	0	0	0	0	1	0	0	0	0	0	1	0.5
Total Count	13	19	29	66	18	16	25	7	6	5	7	211	
Percent	6.2	9.0	13.7	31.3	8.5	7.6	11.8	3.3	2.8	2.4	3.3		100.0
Faunal Bone	0.8	0.8	1.3	6.8	4.1	1.8	2.4	1.6	1.7	0.1	0.2	21.6	1.8
Shell	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.4	0.0
Charcoal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Fire-Affected Rock	0.0	0.0	151.4	488.3	0.0	16.5	0.0	97.1	0.0	341.3	80.0	1174.6	98.1
Total Weight (g)	0.8	0.8	152.7	495.1	4.1	18.3	2.7	98.8	2.0	341.4	80.2	1196.9	
Percent	0.1	0.1	12.8	41.4	0.3	1.5	0.2	8.3	0.2	28.5	6.7		100.0

Artifact Analysis

Bifacial Tools

Two bifacial tools were recovered during testing at CA-SDI-18322. These include a biface fragment and a projectile point fragment. The biface fragment (SDI-18322-136) was recovered from the 60-70 cm level of Unit 1. It is made of clear quartz and has pressure retouching and flake scars on both faces. It appears to be an end to what was a larger tool. It may be an intermediate-stage arrow point fragment but is otherwise not diagnostic as to type.

The projectile point fragment (SDI-18322-69) has evidence of retouching on both sides and appears to be a portion of a point base. It was recovered from the 0-10 cm level of Unit 1 and is also made of quartz. It is still in an intermediate stage of reduction and it not diagnostic as to type.

Flake Tool

A single flake tool (SDI-18322-122) was recovered during testing at this site (Figure 13). It was recovered from the 50-60 cm level of Unit 1. The tool is not characteristic of the Late Prehistoric period and is well patinated. The tool is made from fine-grain green aphanitic Santiago Peak Volcanic material. It appears to be a unifacial scraping tool made from a larger flake. The ventral surface of the tool is the relatively flat scar from the original flake. Unifacial flaking on all edges has removed the original flake platform. The flaking is well done and flake scars cross most of the tool. A second set of smaller flake scars along the edges of the tool may reflect use. Rounding along some of the edges is also present, again indicating use.



Figure 13. Flake Tool

Debitage

Debitage represents the second most abundant cultural material recovered from CA-SDI-18322. This suggests that the role of tool production was reduced at this site. Debitage only represents approximately 38 % of the artifacts recovered. This is unusual because the large amount of debris produced during the manufacture of a single tool usually results in debitage dominating an archaeological assemblage.

Similar to the other resources tested, locally available varieties of quartz dominate the debitage assemblage. Quartz made up approximately 67 percent of the debitage as indicated in Table 29. Milky quartz made up more than 63% of the debitage and clear or crystalline quartz made up only approximately 3%. Again, intensive use of quartz use has often been associated with the Late Prehistoric period.

Table 29. CA-SDI-18322 Debitage Materials and Condition

Debitage Type	Clear Quartz	Milky Quartz	Quartzite	Aph. SPV	Porph. SPV	Cobble Volcanic	Obsidian	Total	Percent
Angular Waste	2	48	2	2	3	0	2	59	60.2
Interior	1	12	3	2	3	0	1	22	22.4
Primary	0	0	2	0	0	1	0	3	3.1
Secondary	0	3	4	3	3	1	0	14	14.3
Total	3	63	11	7	9	2	3	98	
Percent	3.1	64.3	11.2	7.1	9.2	2.0	3.1		100.0

Quartzite was also abundant in the debitage assemblage (11.2%). The assemblage includes both quartzites derived from Eocene cobbles and quartzites from the Julian Schist Formation. Most of the quartzite, however, appears to be from sources to the east in the Julian Schist. Two fragments of Eocene cobble volcanic material were present in the debitage assemblage that are derived from the Ballena gravels.

Both aphanitic and porphyritic varieties of Santiago Peak Volcanic were relatively abundant in the assemblage. This material made up approximately 16 percent of the assemblage and suggests either direct procurement or low level exchange to the west.

Three relatively small fragments of obsidian were recovered during testing. The obsidian most likely came from Obsidian Butte, because the obsidian includes small quartz phenocrysts characteristic of the Obsidian Butte source.

The vast majority of the debitage (82%) lacked cortex. This probably reflects the use of quartz dike sources which lack cortex, and the distance to sources of other materials such as the Santiago Peak Volcanics. The debitage at this locus reflects pressure and core reduction technology dominated by interior thinning and pressure flakes. No large bifacial thinning flakes were present and the assemblage is largely characteristic of flake reduction for the production of arrow points and expedient tools. Overall the debitage assemblage reflects technological indicators suggesting that the site is dominated by a Late Prehistoric assemblage.

Groundstone

Groundstone artifacts were the most abundant tools at CA-SDI-18322, indicating the importance of seed processing at this site (Table 30). A total of 1 metate fragment (SDI-18322-2) and 11 mano fragments (SDI-18322-8, -9, -10, -19, -26, -48, -51, -64, -70, -86, and -162) were recovered from the surface collection, STPs, and test unit. The granitic metate fragment was collected from the surface and appears to be a portion of a much larger implement. The fragment indicates that it was a portion of a shaped portable metate. It was a basin in form and the surface shows heavy use and rejuvenation of the surface by pecking to ensure that it remains abrasive for grinding.

All of the mano fragments show the use of porphyritic volcanic cobbles. Most are highly fragmentary without the ability to determine the number of sides and finish. One large mano fragment (SDI-18322-10) is bifacial and appears to have battering on one end. Most of the mano fragments were also fire-affected, suggesting discard and recycling as hearth stones.

The presence of so many grinding implements suggest seed processing was a very important activity at this site. Many of these artifacts are likely associated with the bedrock milling feature in the central portion of the remaining site.

Pottery

A total of 133 sherds of Tizon Brown Ware pottery were recovered from the testing at CA-SDI-18322. Of these, 47 came from a single level (20-30 cm) in Unit 1. The sherd assemblage has little variability. Sherd inclusions suggest that the vast majority of the assemblage could have come from granitic terrain sediments and contain granitic inclusions. The quantities and types of inclusions are variable, however, suggesting the sherd assemblage represents multiple vessel fragments. Only two body sherds (SDI-18322-17 and SDI-18322-46) clearly indicated that the clay may have come from a Julian Schist-based terrain. Much of the pottery shows fire-blackening and sooting, indicating that many of these fragments represent cooking pots.

Most of the assemblage is made up of body sherds, but 10 rim sherds are also present. One of the Rim sherds (SDI-18322-46) represents a wide mouth cooking pot with a recurved rim and squared lip. Recurved rim forms are often associated with the last period of pottery manufacture. Most of the other rim sherds are smaller and less diagnostic of vessel type. At least two fragments (SDI-18322-169 appear to be direct rims of a relatively shallow vessel or bowl. Most lips are squared, but one rim lip (SDI-18322-89) has overhanging clay on the outside edge of the lip. Pottery is directly associated with the Late Prehistoric period and shows the use of storage and/or cooking containers at the site. It was recovered at a relatively high frequency from throughout the deposit, suggesting the locus is largely single component in age.

Table 30. CA-SDI-18322 Groundstone Attributes

Cat#	Location	Level	Artifact Type	Material Type	Length (mm)	Width (mm)	Thickness (mm)	Count	Weight (g)
SDI-18322-2	Shot# 70	Surface	Metate	Granitic	180+	105.7+	75.40+	1	2307
SDI-18322-8	Shot# 75	Surface	Mano	Cobble Volcanic	71.26+	70.06+	57.89+	1	348.5
SDI-18322-9	Shot# 75	Surface	Mano	Cobble Volcanic	87.55+	58.8+	50.08+	1	331.8
SDI-18322-10	Shot# 76	Surface	Mano	Cobble Volcanic	101.49+	62.75+	58.24+	1	468.8
SDI-18322-19	Shot# 84	Surface	Mano	Cobble Volcanic	69.35+	35.26+	52.08	1	122.4
SDI-18322-26	STP 0N/0E	20-30cm	Mano	Cobble Volcanic	77.25+	53.21+	19.08+	1	82.4
SDI-18322-48	STP 0N/5.5W	20-30cm	Mano	Cobble Volcanic	54.04+	33.64+	57.97	1	155.6
SDI-18322-51	STP 0N/5.5W	30-40cm	Mano	Cobble Volcanic	46.94+	41.06+	22.61+	1	35.6
SDI-18322-64	STP 0N/5.5W	60-70cm	Mano	Cobble Volcanic	38.98+	11.36+	7.25+	1	4
SDI-18322-70	Unit 1	0-10cm	Mano	Cobble Volcanic	17.92+	15.89+	14.07+	1	3.8
SDI-18322-86	Unit 1	20-30cm	Mano	Cobble Volcanic	54.75+	45.54+	21.01+	1	56.3
SDI-18322-162	Unit 1	90-100cm	Mano	Cobble Volcanic	65.53+	52.05+	15.15+	1	53.2

Tourmaline Crystal

A single, small black tourmaline or schorl crystal (SDI-18322-110) was recovered from the 10-20 cm level of Unit 1 during testing. The fragment is very small and is less than 1 cm in size. The crystal does show some natural facets and the surface shows the impressions of crystal facets from adjacent crystals. The crystal does not appear to be modified and has irregular breaks against the natural cleavage on both ends. Tourmaline crystals were used ethnographically in religious and healing activities by the inhabitants of the region. It is unclear if this small fragment was used for such a purpose or was naturally present in the soil of the area.

Shell Beads

A total of seven *Olivella biplicata* beads (SDI-18322-96, -108, -120, -140, -141, -142, -143) and multiple fragments (SDI-18322-111 and -144) were collected from the test unit at SDI-18322 (Table 31). The beads came from the 20-70 cm levels with 5 from the 60-70 cm level of Unit 1. All the beads and fragments appear to be burned. Six of the beads are complete and appear to be Simple Spire-lopped (A1) (Bennyhoff and Hughes 1987) (Figure 14). Artifact SDI-18322-108 is burned and nearly complete, but lacks the spire end, so it is not possible to determine the specific type. Three fragments of a burned *Olivella biplicata* shell (SDI-18322-144) could represent a single spire-lopped bead. The multiple fragments of burned shell (SDI-18322-111) are indeterminable but could represent an *Olivella biplicata* spire-lopped bead.

The simple spire-lopped *Olivella biplicata* beads are most commonly seen during the Early period and Phase I of the Late Prehistoric period in California (Bennyhoff and Hughes 1987). This temporal marker appears to agree with the rest of the artifact assemblage from this site, likely dating from the Late Prehistoric period. Burned beads are often associated with cremations and grave goods, but no other indications of human burial are present at this site.

Table 31. CA-SDI-18322 Shell Bead Attributes

Cat#	Location	Level	Artifact Type	Material Type	Length (mm)	Width (mm)	Count	Weight (g)
96	Unit 1	20-30cm	Bead	Olivella	13.24	8.08	1	0.4
108	Unit 1	30-40cm	Bead	Olivella	12.70+	6.18+	1	0.3
111	Unit 1	40-50cm	Bead	Olivella	Too deteriorated	Too deteriorated	1	0.2
120	Unit 1	50-60cm	Bead	Olivella	16.69	10.11	1	3.5
140	Unit 1	60-70cm	Bead	Olivella	15.01	7.48	1	0.4
141	Unit 1	60-70cm	Bead	Olivella	15.84	7.18	1	0.5
142	Unit 1	60-70cm	Bead	Olivella	13.42	6.24	1	0.2
143	Unit 1	60-70cm	Bead	Olivella	10.07	6.24	1	0.2
144	Unit 1	60-70cm	Bead	Olivella	Too deteriorated	Too deteriorated	3	0.2

Shell

Small amounts of marine shell were recovered from the 30-80 cm levels of Unit 1. Most of these fragments were burned and very small. They included one burned *Haliotis* fragment, one unburned *Argopecten* fragments, and 8 fragments that were unidentifiable as to species, but included at least one gastropod fragment. Marine shell this far inland (>25 miles) was most likely used for the manufacture of ornaments and not as part of food resources.



Figure 14. Shell Beads

Faunal Bone

A total of 24.7 grams of bone were recovered during testing. This is a relatively low frequency given the abundance of other cultural material. The material included 21.6 grams from Unit 1 and 3.1 grams from the STPs. Approximately 60% of the recovered bone was burned and appears to be culturally associated animal bone and not representative of natural animal death. A few of the cultural bones were calcined and it is likely that the calcined specimens were discarded in a fire hearth.

Most of the faunal bone assemblage is unidentifiable to the species level, but it is dominated by small and medium-size mammal. Rabbit and pocket gopher are the only identifiable animals in the assemblage, but one reptile vertebrae is also present. A small amount of large mammal bone dominated by a large rib fragment probably represents the use of deer. No human remains were recovered during testing although a rib and some of the calcined bone was taken in for analysis due to its association with the burned beads. Ms. Rose Tyson of the San Diego Museum of Man confirmed that none of the bone was possibly human.

Charcoal and Fire-Affected Rock

Charcoal was present in small amounts during subsurface excavations at the site. Some recent surface charcoal associated with brush fires was noted on the surface. The subsurface charcoal may be cultural in origin based on the amount of fire-affected rock. The sooting on the pottery and the presence of fire-affected rock suggests that cooking activities were an important aspect of life at this site.

A total of 7176 grams of fire-affected rock were recovered during testing. The majority of fire-affected rock was collected during STP excavation (60.4%), and a relatively low amount was collected from the unit (16.6%). No clustering of fire-affected rock was present, but cooking and hearth features were probably present at the site in the past. Most of the fire-affected rock was made up of locally available sub-rounded granitic rock fragments that could have been collected nearby.

5.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance

The archaeological survey resulted in the location of two archaeological sites (CA-SDI-18321 and CA-SDI-18322) within the project area along with three isolated artifacts (P-37-028204, P-37-028205, and P-37-028206). Sites CA-SDI-18321 and CA-SDI-18322 have not been previously evaluated for nomination to the California Register of Historical Resources (California Register) or for significance under the County RPO. Isolates P-37-028204, P-37-028205, and P-37-028206 do not qualify as eligible for the California Register or the County RPO and no further work is needed to address these resources.

Under current County guidelines both site CA-SDI-18321 and CA-SDI-18322 qualify as significant for the purposes of CEQA. The presence of the two archaeological sites within the potential project impact area required that a testing program be completed to assess integrity and to recover data to determine the nature and extent of these resources.

The testing program determined that site CA-SDI-18321 and site CA-SDI-18322 are prehistoric temporary camps with associated bedrock milling. CA-SDI-18321 and site CA-SDI-18322 were determined to have intact subsurface deposits with the potential to yield additional important information (Figure 15). The information contained in these deposits can address important research questions developed in the research design. The subsurface deposits contained shell beads, obsidian, time-diagnostic, projectile points, lithic tools, groundstone tools, debitage, and marine shell and faunal bone in sufficient quantities to address questions developed in the research design.

CA-SDI-18321 Locus C and D did not have associated subsurface deposits or sufficient quantities to address questions developed in the research design. The information contained in these resources has been recovered during the testing program and no adverse effects will result from impacts to these areas.

Portions of Locus A and Locus B of site CA-SDI-18321 and site CA-SDI-18322 retain important information and are considered significant resources under current County guidelines for determining resource importance and under Criteria D of CEQA. These resources are recommended as eligible for nomination to the California Register of Historical Resources (California Register) based on their potential to provide important information on prehistory. Locus A and Locus B of site CA-SDI-18321 and site CA-SDI-18322 do not meet the criteria for significance under the County RPO.

Figure 15
Significant Cultural Deposits and Project Impacts
(Confidential figure located in Appendix G)

5.2 Impact Identification

Current plans indicate that both direct and indirect impacts are proposed for site CA-SDI-18321 (Figure 16). Locus C will be directly impacted by brush clearance within the Limited Building Zone. Locus A, B, and D will not be directly impacted by the project and will be placed in a dedicated open space easement. Site CA-SDI-18322 is not within a direct impact area and will be within proposed open space. Indirect impacts to Locus A, B, and D of CA-SDI-18321 and CA-SDI-18322 will be mitigated through permanent fencing of the open space easement. Isolates P-37-028204 and P-37-028206 will be directly impacted by the project while isolate P-37-028205 is within a proposed open space easement and will not be directly impacted.

Figure 16

Associated Cultural Resources and Project Impacts

(Confidential figure located in Appendix G)

6.0 MANAGEMENT CONSIDERATIONS-MITIGATION MEASURES AND DESIGN CONSIDERATIONS

The goal of the project was to identify resources that may be impacted by the project. The archaeological survey resulted in the location of prehistoric sites CA-SDI-18321 and CA-SDI-18322 within the project area along with three isolated artifacts (P-37-028204, P-37-028205, and P-37-028206). A testing program was conducted to help establish the integrity and extent of the two sites within the project area. Subsurface cultural deposits eligible for nomination to the California Register were identified at site CA-SDI-18321 and site CA-SDI-18322. Under CEQA impacts to significant cultural resources require mitigation.

6.1 Mitigable Impacts

Impacts to Locus A, B, and D of site CA-SDI-18321 and site CA-SDI-18322 will be avoided and these resources will be incorporated into open space easements. Current plans indicate direct and indirect impacts are proposed for portions of site CA-SDI-18321. Locus C will be directly impacted by brush clearance. Locus A, B, and D will not be directly impacted by the project and will be placed into dedicated open space. Site CA-SDI-18322 is not within a direct impact area and will be within proposed open space. Indirect impacts to Locus A, B, and D of CA-SDI-18321 and CA-SDI-18322 will be mitigated through permanent fencing of the open space easement.

In addition to mitigation of direct and indirect impacts to site CA-SDI-18321 and site CA-SDI-18322, construction monitoring is recommended to mitigate any additional cultural components that might be encountered during grading.

6.2 Non Significant Adverse Effects

Isolates P-37-028204 and P-37-028206 will be directly impacted by the project while isolate P-37-028205 is within a proposed open space easement and will not be directly impacted. Isolates P-37-028204, P-37-028205, and P-37-028206 do not qualify as eligible for the California Register or the County RPO and impacts to these resources will not result in a significant adverse effect.

CA-SDI-18321 Locus C did not have associated subsurface deposits or sufficient quantities to address questions developed in the research design. The information contained in this resource has been recovered during the testing program and no adverse effects will result from impacts to this area.

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8.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

8.1 List of Preparers

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Andrew R. Pignuolo, RPA, Primary Author
Elizabeth Davidson, Primary Author

8.2 List of Persons and Organizations Contacted

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Clint Linton, Gabriel Kitchen

Native American Heritage Commission

Larry Myers

South Coastal Information Center (SCIC)

Seth Mallios

Museum of Man

Phillip Hoog, Ms. Rose Tyson

9.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Mitigation Measures	Design Considerations
Incorporate CA-SDI-18321 Locus A, B, and D and CA-SDI-18322 into open space easements.	Incorporation of CA-SDI-18321 Locus A, B, and D and CA-SDI-18322 into open space easements to avoid direct impacts to CA-SDI-18321 and CA-SDI-18322.
Permanently fence the boundaries of this open space easement where access can be achieved.	Fencing will mitigate indirect impacts to CA-SDI-18321 and CA-SDI-18322 associated with property use and increased access.
Archaeological and Native American monitoring program of the area to address the potential for undiscovered resources.	Implement an archaeological and Native American monitoring program to ensure that potential resources are identified and mitigated appropriately.
Curate testing and data recovery collections.	Provide for curation of archaeological materials recovered during testing, along with associated photographs and documentation.

APPENDICES

- A. Resumes of Principal Investigators**
- B. Native American Correspondence**
- C. Artifact Catalogues**
- D. Photograph Logs**
- E. Records Search Confirmations and Site Locations (Confidential)**
- F. Site Forms and Site Form Updates (Confidential)**
- G. Confidential Figures (Confidential)**

APPENDIX A

RESUMES OF PRINCIPAL INVESTIGATORS

APPENDIX B

NATIVE AMERICAN CORRESPONDENCE

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
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April 19, 2007

Ms. Gail Wright, Staff Archaeologist

COUNTY OF SAN DIEGO

5201 Ruffin Road, Suite B
San Diego, CA 92123-1666

Sent by FAX to: 858-694-3373
Number of pages: 2

Re: Tribal Consultation Per SB 18/Sacred Lands File Search for Project- Neumann TPM: TPM 20962; Log No. 05-09-021; Ramona Area; San Diego County, California

Dear Ms. Wright:

Government Code §65352.3 requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places. Attached is a Native American Tribal Consultation list of tribes with traditional lands or cultural places located within the requested plan boundaries.

As a part of consultation, the NAHC recommends that local governments conduct record searches through the NAHC and California Historic Resources Information System (CHRIS) to determine if any cultural places are located within the area(s) affected by the proposed action.

A NAHC Sacred Lands File search was conducted based on the township, range, and section information included in your request and no sites were found within the area of potential effect you identified. However, local governments should be aware that records maintained by the NAHC and CHRIS are not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a cultural place. I suggest you consult with all of those on the accompanying Native American Contacts list, which has been included separately. If they cannot supply information, they might recommend others with specific knowledge about cultural resources in your plan area. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from Tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at (916) 653-6251.

Sincerely,

Dave Singleton, Program Analyst

Attachment: Native American Contacts

Native American Tribal Consultation List
San Diego County
April 18, 2007

Barona Group of the Capitan Grande
Rhonda Welch-Scalco, Chairperson
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Lakeside , CA 92040
rue@barona-nsn.gov
619) 443-6612

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
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Pine Valley , CA 91962
(619) 709-4207

San Pasqual Band of Mission Indians
Allen E. Lawson, Chairperson
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Valley Center , CA 92082
760) 749-3200

Inaja Band of Mission Indians
Rebecca Osuna, Spokesperson
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Escondido , CA 92025
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Escondido Grande Band of Mission Indians
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(60) 782-3818

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Government Code Section 65352.3.

LOCAL GOVERNMENT TRIBAL CONSULTATION LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364

SACRAMENTO, CA 95814

(916) 653-4082

(916) 657-5390 - Fax

Project Title: Neumann TPM; TPM 20962, Log No. 05-09-021; APN 280-130-03

Local Government/Lead Agency: COUNTY OF SAN DIEGO

Contact Person: Gail Wright

Street Address: 5201 Ruffin Road, Suite B

City: San Diego

Zip Code: 92123-1666

Phone Number: (858) 694-3003

Fax Number: (858) 694-3373

Specific Area Subject to Proposed Action

County: San Diego

City/Community: Ramona

Local Action Type: OTHER

☐ General Plan ☐ General Plan Element ☐ General Plan Amendment

☐ Specific Plan ☐ Specific Plan Amendment

☐ Pre-Planning Outreach Activity

Project Description:

This project is proposing to subdivide 39.4 acres into 4 lots for single family home use.

☒ **Sacred Lands File Search and Native American Contacts List Request**
Information Below is Required for a Sacred Lands File Search

USGS Quadrangle Name: Ramona

Township: 13S

Range:

01E

Section(s):

12



GARY L. PRYOR
DIRECTOR

County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

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EL CAJON, CA 92020-3912
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April 26, 2007

TO:

Barona Group of the Capitan Grande
Ms. Rhonda "Lisa" Welch-Scalco, Chairwoman
Campo Kumeyaay Nation
Mr. H. Paul Cuero, Jr. Chairman
Inaja Band of Mission Indians
Ms. Rebecca Osuna, Chairperson
Kumeyaay Cultural Repatriation Committee
Mr. Steve Banegas, Spokesperson
Kwaaymii Band of Mission Indians
Ms. Carmen Lucas
Mesa Grande Band of Mission Indians
Mr. Mark Romero, Chairman
San Pasqual Band of Mission Indians
Mr. Allen E. Lawson Jr., Chairman
Santa Ysabel Band of Diegueno Indians
Devon Reed Lomayesva, Esq., Office of Tribal Attorney
Viejas Band of Kumeyaay Indians
Mr. Bobby L. Barrett, Chairman

RE: SACRED LANDS CHECK; Neumann TPM; TPM 20962, Log No. 05-09-021; APN 280-130-03; Section: 12, Township: 13S, Range: 01E; USGS Quad: Ramona

The County of San Diego (County) requests your participation in the review process of the Neumann TPM project (TPM 20962, Log No. 05-09-021). This project proposes to subdivide 39.4 acres into 4 lots for single family home use. It is located in the community planning area of Ramona (APN 280-130-03) and is subject to the California Environmental Quality Act (CEQA), and the County of San Diego Resource Protection Ordinance (RPO). Staff contacted the Native American Heritage Commission (NAHC) who has requested that we contact you directly regarding the potential for the presence of Native American cultural resources that may be impacted by this project. The project is currently in the process of environmental review.

Any information you have regarding cultural places will be kept strictly confidential and will not be divulged to the public. Although we are providing to you for the purposes of your review this confidential information regarding the location of cultural places, this information is not available to the public.

The County of San Diego feels that your comments regarding decisions that may affect ancestral tribal sites are very important. Please forward any comments regarding this project to me by May 26, 2007.

If you have any questions, you can reach me at (858) 694-3003; further contact information can be found below.

Sincerely,

Gail Wright

Gail Wright
Staff Archaeologist
Department of Planning and Land Use
5201 Ruffin Road, Suite B, MS 0650
San Diego, CA 92123-1666
(858) 694-3003
(858) 694-3373 fax
[<mailto:gail.wright@sdcounty.ca.gov>](mailto:gail.wright@sdcounty.ca.gov)

GW:gw, jl

Attachment
USGS Ramona Map

cc: Tim and Christine Neumann, 18489 Ramona View Drive, Ramona, CA 92065
Don Ayles, ERB Engineering, 12320 Stowe Drive, Suite E, Poway, CA 92064
Monica Bilodeau, Project Manager, Department of Planning and Land Use,
M.S. 0650
Chantal Saipe, Tribal Liaison, Chief Administrative Office, M.S. A-6



MEMORANDUM TO RECORD

Re: Neumann Test

Date: 7-7-07

To Whom It May Concern,

With regard to the findings of the above mentioned project, Red Tail's recommendations are as follows:

- 1) Multiple burnt shell beads came from the eastern site. These beads can only be grave goods. Most of the site had been graded away. I am of the opinion that cremation burials are located on site and many of them may have been destroyed from past grading. This site should be preserved into openspace in hopes that no further impacts to this place shall occur.
- 2) During testing a rock shelter was discovered. It is a cave system cut into the drainage from centuries of water-flow. A metate and some stone tools were found on the surface of the shelter but no material was recovered from the two STP's excavated. There is no evidence of disturbance by modern people. This site should also be protected. It is associated with the two sites on top of either side of the drainage. All sites discussed should be incorporated into 1 site with separate loci. They are part of a system utilizing the resources of the drainage. A small stand of basket bush was located at the top entrance of the shelter.
- 3) Both Native and Archaeological Monitors should be present to for all ground disturbing activities related to this project. This includes all phases of construction activity that involve the disturbance of soils. In the event of an inadvertent discovery, more Archaeological investigation should be conducted.

Please feel free to contact me with any questions or concerns.

Thank you,

Sincerely,

Clint Linton
P.O. Box 507
Santa Ysabel, CA 92070
(760) 803-5694

APPENDIX C
ARTIFACT CATALOGUES

CA-SDI-18321 CATALOGUE

Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
1	C	Shot#1	Surface	Surface	Groundstone	Mano	Fragment	-	CV	78.46+	54.85+	40.33+	1	292.3	Fragmented on both ends
2	C	Shot#2	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	243.6	DISCARDED
3	C	Shot#3	Surface	Surface	Groundstone	Mano	Fragment	-	CV	61.98+	42.84+	21.69+	1	62.2	Small fragment and Fire-affected
4	C	Shot#4	Surface	Surface	Lithic	Flake	Whole	Secondary	Milky Quartz	0.7	-	-	1	0.7	
5	C	Shot#5	Surface	Surface	Groundstone	Pestle/Mano	Whole	-	CV	220	120.36	44	1	2952	Polished and crushing on one end and polish on two side two sides
6	C	Shot#6	Surface	Surface	Lithic	Flake	Whole	Secondary	Clear Quartz	-	-	-	1	0.3	
7	C	Shot#7	Surface	Surface	Lithic	Flake	Whole	Secondary	CV	-	-	-	1	24.6	
8	C	Shot#8	Surface	Surface	Lithic	Flake	Whole	interior	Clear Quartz	-	-	-	1	0.1	
9	C	Shot#9	Surface	Surface	Lithic	Flake	Whole	Secondary	Clear Quartz	-	-	-	1	0.4	
10	D	Shot#10	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	4.3	
11	D	Shot#11	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	3.1	
12	D	Shot#12	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	7.6	
13	D	Shot#13	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	2	28	
14	D	Shot#14	Surface	Surface	Groundstone	Mano	Whole	-	CV	90.11	58.87	44.08	1	373.8	Bifacial polishing, Fire-affected
15	D	Shot#15	Surface	Surface	Groundstone	Mano	Fragment	-	CV	49.88+	22.71+	18.84+	1	20.4	Fire-affected
16	D	Shot#16	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	10.9	
17	D	Shot#17	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	12.4	
18	D	Shot#18	Surface	Surface	Lithic	Flake	Whole	Primary	CV	-	-	-	1	10.8	
19	D	Shot#19	Surface	Surface	Lithic	Core	Whole	-	Quartzite	53.89	49.76	21.45	1	63.8	
20	D	Shot#20	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	3	30.7	
21	D	Shot#21	Surface	Surface	Lithic	Flake	Whole	Secondary	CV	-	-	-	1	1.8	
22	D	Shot#22	Surface	Surface	Groundstone	Metate	Fragment	-	CV	71.71+	42.63+	32.42+	1	91.7	Fire-affected
23	D	Shot#23	Surface	Surface	Groundstone	Mano	Fragment	-	CV	53.52+	37.41+	17.38+	1	27.3	Fire-affected
24	A	Shot#24	Surface	Surface	Lithic	Flake	Whole	interior	APH-SPV	-	-	-	1	6.9	
25	A	Shot#25	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	2	5	
26	A	Shot#26	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	5.3	Plant imprint
27	A	Shot#27	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	9.6	
28	A	Shot#28	Surface	Surface	Lithic	Test Core	Whole	-	Milky Quartz	55.6	45.51	27.1	1	62.1	One Flake Scar
29	A	Shot#29	Surface	Surface	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.4	
30	A	Shot#30	Surface	Surface	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0.3	
31	A	Shot#31	Surface	Surface	Tool	Biface	Fragment	-	Milky Quartz	24.22+	17.81+	7.08+	1	2.5	
32	A	Shot#32	Surface	Surface	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.9	
33	A	Shot#33	Surface	Surface	Ecofact	FAR	Whole	-	Gabbroic	-	-	-	1	150.3	DISCARDED
34	A	Shot#34	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	1.7	
35	A	Shot#35	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	2	0.9	
36	A	Shot#36	Surface	Surface	Debitage	Angular Waste	Whole	-	LV	-	-	-	1	26.2	
37	A	Shot#37	Surface	Surface	Lithic	Flake	Whole	-	Clear Quartz	-	-	-	1	0.7	
38	A	Shot#38	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	1	
39	A	Shot#39	Surface	Surface	Groundstone	Mano	Fragment	-	CV	93.3+	109.89	50.66	1	856.2	Well Developed shoulders, crushing on one side and fragmented on other side.
40	A	Shot#40	Surface	Surface	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.1	
41	A	Shot#41	Surface	Surface	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	1	4.1	
42	A	Shot#42	Surface	Surface	Lithic	Flake	Whole	Secondary	APH-SPV	-	-	-	1	0.6	
43	A	Shot#43	Surface	Surface	Lithic	Flake	Whole	Secondary	Clear Quartz	-	-	-	1	1.5	
44	A	Shot#44	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	1.4	
45	A	Shot#45	Surface	Surface	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	1	0.9	
46	A	Shot#46	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	113.3	
47	A	Shot#47	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	2	0.8	Two small pieces
48	A	Shot#47	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	3.2	
49	A	Shot#48	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	4.8	Very thick piece
50	A	Shot#47	Surface	Surface	Groundstone?	Metate Frag?	broken	-	Granitic	28.48+	19.95+	28.74+	1	17.5	Small fragment, not sure if it's a Metate or Mano or natural
51	A	Shot#49	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	445.7	Friable and burnt of n one side. DISCARDED
52	A	Shot#50	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	2	0.8	
53	A	Shot#50	Surface	Surface	Debitage	Angular Waste	Whole	-	Quartzite	-	-	-	1	0.2	
54	A	Shot#51	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	3	0.7	

CA-SDI-18321 CATALOGUE

Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
55	A	Shot#52	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	3.4	
56	A	Shot#52	Surface	Surface	Lithic	Flake	Whole	-	Milky Quartz	-	-	-	1	0.2	
57	A	Shot#53	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	328.4	Burnt on one side/DISCARDED
58	A	Shot#54	Surface	Surface	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	2	1.1	
59	A	Shot#54	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	0.9	
60	A	Shot#54	Surface	Surface	Bone	Faunal	Burnt Fragment	-	Bone	-	-	-	2	0.4	
61	A	Shot#55	Surface	Surface	Pottery	Tizon Brown Ware	Body Fragment	-	Pottery	-	-	-	1	5.7	
62	A	Shot#56	Surface	Surface	Bone	Faunal	Burnt Fragment	-	Bone	-	-	-	2	0.6	
63	A	Shot#57	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	3.9	
64	A	Shot#58	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	2	0.9	
65	A	Shot#58	Surface	Surface	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	2	2.2	
66	A	Shot#58	Surface	Surface	Bone	Faunal	Fragment	-	Bone	-	-	-	1	0.2	
67	A	Shot#59	Surface	Surface	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	1	1.8	
68	A	Shot#63	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	4181	
69	A	Shot#60	Surface	Surface	Lithic	Flake	Whole	-	Milky Quartz	-	-	-	1	0.7	
70	A	Shot#61	Surface	Surface	Groundstone	Possible Mano Fragr	Fragment	-	CV	-	-	-	1	59	Appears Fire-affected on one side
71	A	Shot#62	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	3.6	
72	A	Shot#64	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	4.2	
73	A	Shot#65	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	8.8	
74	A	Shot#66	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	3.8	
75	A	Shot#67	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	2.5	
76	A	Shot#68	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	190.8	Fire-affected all the way through. DISCARDED
77	B	Shot#86	Surface	Surface	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	1	0.3	
78	B	Shot#86	Surface	Surface	Groundstone	Mano	Fragment	-	CV	27.64+	13.64+	28.46+	1	7.1	Fire-affected, very small fragment
79	B	Shot#89	Surface	Surface	Lithic	Flake	Whole	Primary	CV	-	-	-	1	10.6	
80	B	Shot#87	Surface	Surface	Groundstone	Mano	Fragment	-	CV	71.46+	24.46+	17.41+	1	39.8	Very small fragment, possible mano fragment, Fire-affected
81	B	Shot#88	Surface	Surface	Groundstone	Pestle	Whole	-	CV	270	127.04	99.9	1	1994	
82	B	Shot#90	Surface	Surface	Bone	Faunal	Burnt Fragment	-	Bone	-	-	-	1	0.2	
83	B	Shot#91	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	14	
84	B	Shot#92	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	2.6	
85	B	Shot#92	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	19.6	DISCARDED
86	B	Shot#93	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	7.2	
87	B	Shot#94	Surface	Surface	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	10.8	
88	B	Shot#94	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	185.8	Local material, DISCARDED
89	B	Shot#95	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	2.2	
90	B	Shot#96	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	61	DISCARDED
91	B	Shot#97	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	6.7	
92	B	Shot#98	Surface	Surface	Lithic	Flake	Whole	Secondary	CV	-	-	-	1	63.9	Large Flake
93	B	Shot#99	Surface	Surface	Ecofact	FAR	Whole	-	CV	-	-	-	1	105.4	DISCARDED
94	B	Shot#99	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	996.4	DISCARDED
95	B	Shot#99	Surface	Surface	Tool	Hammerstone	Whole	-	Quartz Cobble	91.6	63.77	4.82	1	410.4	Crushing on one end
96	B	Shot#99	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	672.7	Fire-affected on approx 1/3 of the rock
97	B	Shot#100	Surface	Surface	Ecofact	FAR	Whole	-	Gabbroic	-	-	-	1	80.4	DISCARDED
98	B	Shot#101	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	95.2	DISCARDED
99	B	Shot#101	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	0.3	
100	B	Shot#102	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	590.8	DISCARDED
101	B	Shot#103	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	57.5	DISCARDED
102	B	Shot#104	Surface	Surface	Debitage	Angular Waste	Whole	-	Milky Quartz	-	-	-	1	3.1	
103	B	Shot#105	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	206.5	DISCARDED
104	B	Shot#106	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	7.9	
105	B	Shot#107	Surface	Surface	Tool	Hammerstone	Fragment	-	Aplite	57.04+	26.57+	20.3+	1	31.7	Possible groundstone artifcat, not enough of it to tell
106	B	Shot#108	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd	-	Pottery	-	-	-	1	5.4	
107	B	Shot#109	Surface	Surface	NA	Feldspar cobble	NA	-	Feldspar	-	-	-	1	0	DISCARDED, not a cultural item

CA-SDI-18321 CATALOGUE

Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
108	B	Shot#110	Surface	Surface	Lithic	Flake	Whole	Primary	Quartzite	-	-	-	1	2	1/2 of flake is covered with cortex
109	B	Shot#111	Surface	Surface	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	277.8	DISCARDED
110	B	Shot#112	Surface	Surface	Pottery	Tizon Brown Ware	Body Sherd		Pottery	-	-	-	1	0.7	
111	B	Shot#113	Surface	Surface	Lithic	Flake	Whole	Secondary	APH-SPV	-	-	-	1	0.6	
112	B	Shot#114	Surface	Surface	Lithic	Flake	Whole	Interior	POR-SPV	-	-	-	1	0.2	
113	A	STP# 0N/ 0E	STP	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.1	
114	A	STP# 0N/ 0E	STP	0-10cm	Groundstone	Mano	Fragment	-	Quartzite	28.57+	16.01+	11.62+	1	4.5	
115	A	STP# 0N/ 0E	STP	0-10cm	Bone	Faunal	Fragment	-	Bone	-	-	-	3	0.5	
116	A	STP# 0N/ 0E	STP	10-20cm	Ecofact	FAR	Whole	-	Granitic	-	-	-	1	52.4	DISCARDED
117	A	STP# 0N/ 0E	STP	10-20cm	Bone	Faunal	Fragment	-	Bone	-	-	-	6	0.4	
118	A	STP# 0N/ 0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0	Very small microflake
119	A	STP# 0N/ 0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	3	0.3	
120	A	STP# 0N/ 0E	STP	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	3	0.2	
121	A	STP# 0N/ 0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	2	0.8	
122	A	STP# 0N/ 0E	STP	10-20cm	Debitage	Angular Waste	Whole		Granitic	-	-	-	1	0.1	
123	A	STP# 0N/ 0E	STP	20-30cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0.1	
124	A	STP# 0N/ 0E	STP	20-30cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	0	
125	A	STP# 0N/ 0E	STP	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	2	0.4	very small fragments
126	A	STP# 0N/ 0E	STP	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	2	0.1	very small fragments
127	A	STP# 0N/ 0E	STP	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	1	0.1	
287	B	STP# 0N/0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	1	0.2	
376	D	STP# 0N/0E	STP	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.8	
130	A	STP# 0N/10W	STP	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	14	4.2	
131	A	STP# 0N/10W	STP	10-20CM	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	6	1.6	
132	A	STP# 0N/10W	STP	10-20CM	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	1	0.7	
133	A	STP# 0N/10W	STP	10-20CM	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	2	0.2	
134	A	STP# 0N/10W	STP	10-20CM	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0.2	
135	A	STP# 0N/10W	STP	10-20CM	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	2	0.5	
136	A	STP# 0N/10W	STP	10-20CM	Bone	Faunal	Fragment		Bone	-	-	-	5	0.1	
137	A	STP# 0N/10W	STP	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	3	0.2	
138	A	STP# 0N/10W	STP	20-30cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	8	0.9	
139	A	STP# 0N/10W	STP	20-30cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	3	0.2	
140	A	STP# 0N/10W	STP	20-30cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	6	0.2	
141	A	STP# 0N/10W	STP	20-30cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	8	1.2	
142	A	STP# 0N/10W	STP	20-30cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	11	1	
143	A	STP# 0N/10W	STP	20-30cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.1	
144	A	STP# 0N/10W	STP	20-30cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0	
145	A	STP# 0N/10W	STP	30-40cm	Ecofact	Charcoal	Fragment		Charcoal	-	-	-	5	0.1	
146	A	STP# 0N/10W	STP	30-40cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	8	1.3	
147	A	STP# 0N/10W	STP	30-40cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	5	1	
148	A	STP# 0N/10W	STP	30-40cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	6	0.9	
149	A	STP# 0N/10W	STP	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	7	0.5	
150	A	STP# 0N/10W	STP	30-40cm	Lithic	Flake	Whole	Interior	Chert	-	-	-	1	0	Small thinning flake
151	A	STP# 0N/10W	STP	30-40cm	Debitage	Angular Waste	Whole		Aplite	-	-	-	1	0.2	
152	A	STP# 0N/10W	STP	30-40cm	Lithic	Flake	Whole	Interior	Gabbroic	-	-	-	1	2.1	
153	A	STP# 0N/10W	STP	30-40cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.5	
154	A	STP# 0N/10W	STP	30-40cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	3	1.4	
155	A	STP# 0N/10W	STP	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	6	0.1	
156	A	STP# 0N/10W	STP	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	1	74.6	DISCARDED
157	A	STP# 0N/10W	STP	40-50cm	Ecofact	FAR	Whole		Feldspar	-	-	-	2	75.5	This was one rock that broke into two pieces. DISCARDED
158	A	STP# 0N/10W	STP	40-50cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	6	1.1	
159	A	STP# 0N/10W	STP	40-50cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	12	1	
160	A	STP# 0N/10W	STP	40-50cm	Bone	Faunal	Fragment		Bone	-	-	-	3	0	
268	B	STP# 0N/20E	STP	0-10cm	Ecofact	FAR	Whole		CV	-	-	-	2	325.5	DISCARDED
269	B	STP# 0N/20E	STP	10-20cm	Lithic	Flake	Whole	Secondary	APH-SPV	-	-	-	1	0.6	Black
161	A	STP# 0N/20W	STP	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.1	
162	A	STP# 0N/20W	STP	10-20cm	Lithic	Flake	Whole/Burnt	Interior	APH-SPV	-	-	-	1	0.6	
163	A	STP# 0N/20W	STP	10-20cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0	Thinning flake
164	A	STP# 0N/20W	STP	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	0.2	

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Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
165	A	STP# 0N/20W	STP	10-20cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	1.4	
166	A	STP# 0N/20W	STP	10-20cm	Lithic	Flake	Whole	Primary	APH-SPV	-	-	-	1	1.5	
167	A	STP# 0N/20W	STP	20-30cm	Lithic	Retouched Flake	Broken	Primary	Granitic	-	-	-	1	35.3	Unifacial, retouched on one side only.
128	A	STP# 10N/ 0E	STP	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	1	0.1	
129	A	STP# 10N/ 0E	STP	20-30cm	Ecofact	FAR	Whole		Granitic	-	-	-	1	51.5	DISCARDED
373	C	STP# 10S/0E	STP	10-20cm	Ecofact	FAR	Whole		Granitic	-	-	-	4	318	DISCARDED
374	C	STP# 10S/0E	STP	10-20cm	Debitage	Angular Waste	whole		Milky Quartz	-	-	-	1	2.5	
375	C	STP# 10S/0E	STP	0-10cm	Groundstone	Mano	Fragment		CV	109.09+	63.78	49.27	1	457.9	FAR
168	A	STP# 10S/0E	STP	0-10cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	2	0	
169	A	STP# 10S/0E	STP	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	2	0.1	
170	A	STP# 10S/0E	STP	0-10cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	5	0.5	
171	A	STP# 10S/0E	STP	0-10cm	Bone	Faunal	Fragment		Bone	-	-	-	2	0	
172	A	STP# 10S/0E	STP	0-10cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	2	0.2	
173	A	STP# 10S/0E	STP	10-20cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	4	0.5	
174	A	STP# 10S/0E	STP	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	6	0.4	
175	A	STP# 10S/0E	STP	10-20cm	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	1	0.6	
176	A	STP# 10S/0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0	
177	A	STP# 10S/0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	5	0.7	
178	A	STP# 10S/0E	STP	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	3	0.9	
179	A	STP# 10S/0E	STP	10-20cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.1	
180	A	STP# 10S/0E	STP	10-20cm	Ecofact	FAR	Fragment		Quartz Cobble	-	-	-	1	15.2	DISCARDED
181	A	STP# 10S/0E	STP	20-30cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	0.1	
182	A	STP# 10S/0E	STP	20-30cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	1	0	Too small to really tell if it is faunal or other
183	A	STP# 25S/31W	STP	0-10cm	Pottery	Tizon Brown Ware	Body sherd		Pottery	-	-	-	3	6.3	
184	A	STP# 25S/31W	STP	0-10cm	Pottery	Tizon Brown Ware	Rim Sherd		Pottery	-	-	-	1	2.1	
185	A	STP# 40S/40W	STP	0-10cm	Pottery	Tizon Brown Ware	Body sherd		Pottery	-	-	-	1	1.3	
270	B	STP# 5S/0E	STP	0-10cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	0.1	
271	B	STP# 5S/0E	STP	0-10cm	Bone	Faunal	Fragment		Bone	-	-	-	2	0.2	
272	B	STP# 5S/0E	STP	0-10cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	1	0.4	
273	B	STP# 5S/0E	STP	0-10cm	Bone	Faunal	Bone		Bone	-	-	-	2	0.1	
276	B	STP# 5S/0E	STP	10-20cm	Pottery	Tizon Brown Ware	Body Sherd		Pottery	-	-	-	8	15	
277	B	STP# 5S/0E	STP	10-20cm	Pottery	Tizon Brown Ware	Rim Sherd		Pottery	-	-	-	1	1.9	
278	B	STP# 5S/0E	STP	10-20cm	Bone	Faunal	Bone		Bone	-	-	-	2	0.1	
279	B	STP# 5S/0E	STP	10-20cm	Debitage	Angular Waste	whole		Obsidian	-	-	-	1	0.2	
280	B	STP# 5S/0E	STP	10-20cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0	
281	B	STP# 5S/0E	STP	20-30cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	2	0.2	
282	B	STP# 5S/0E	STP	20-30cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0.1	
283	B	STP# 5S/0E	STP	20-30cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	2	0.1	
284	B	STP# 5S/0E	STP	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	4	0.6	
285	B	STP# 5S/0E	STP	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	1	0	
286	B	STP# 5S/0E	STP	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	2	64.8	
288	B	STP#0N/10W	STP	0-10cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	0.2	
289	B	STP#0N/10W	STP	0-10cm	Ecofact	FAR	Whole		CV	-	-	-	1	81.8	DISCARDED
186	A	Unit 1	Unit	0-10cm	Pottery	Tizon Brown Ware	Body sherd		Pottery	-	-	-	2	12.6	
187	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	13	28.4	
188	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	11	11.4	
189	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	18	2.5	
190	A	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	63	17.5	
191	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Clear Quartz	-	-	-	3	1.4	
192	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	10	0.8	
193	A	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	11	0.9	
194	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	0.9	
195	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	2	0.8	
196	A	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	3	0.3	One green and two black
197	A	Unit 1	Unit	0-10cm	Lithic	Retouched Flake	Whole	Interior	Granitic	-	-	-	1	11.6	Unifacial, retouched on one side only.
198	A	Unit 1	Unit	0-10cm	Ecofact	FAR	Whole		Granitic	-	-	-	11	88.1	
199	A	Unit 1	Unit	0-10cm	Groundstone	Mano	Fragment		CV	42.9+	28.75+	11.38+	1	14.4	
200	A	Unit 1	Unit	0-10cm	Groundstone	Mano	Fragment		CV	40.49+	24.77+	41.31+	1	34.7	

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Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
201	A	Unit 1	Unit	0-10cm	Tool	Projectile Pt Cottonw	Fragment		Milky Quartz	19.83+	17.27	4.96	1	1.7	Tip is missing
202	A	Unit 1	Unit	0-10cm	Tool	Projectile Pt Cottonw	Fragment		Milky Quartz	22.7+	14.99+	6.54	1	1.5	Tip and 1 side of the base missing
203	A	Unit 1	Unit	0-10cm	Bone	Faunal	Fragment		Bone	-	-	-	30	3.2	
204	A	Unit 1	Unit	0-10cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	12	1.1	
205	A	Unit 1	Unit	10-20cm	Pottery	Tizon Brown Ware	Body Sherd		Pottery	-	-	-	2	15.9	
206	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	1	0.5	
207	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	5	2.1	
208	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	15	2.2	
209	A	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	66	32.2	
210	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	7	0.6	
211	A	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	6	0.4	
213	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	1	6.5	
214	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.3	Black
215	A	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	1.7	
216	A	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.2	Black
217	A	Unit 1	Unit	10-20cm	Groundstone	Possible Mano Frag	Fragment		CV	26.4+	15.24+	19.54+	1	6.1	Very Small fragment, could be a polished cobble frag
218	A	Unit 1	Unit	10-20cm	Tool	Projectile Pt Cottonw	Fragment		Milky Quartz	17.28+	10.87+	6.25	1	0.7	fragment include part of the base. The existing portion looks like a cottonwood triangular.
219	A	Unit 1	Unit	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	25	3.4	
220	A	Unit 1	Unit	10-20cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	13	2	
221	A	Unit 1	Unit	20-30cm	Ecofact	FAR	Whole		Granitic	-	-	-	5	325.5	DISCARDED
222	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Primary	CV	-	-	-	1	85.5	Large very eroded flake. May be a primary or secondary flake but cortex has eroded away making it hard to discern.
223	A	Unit 1	Unit	20-30cm	Groundstone	Mano	Fragment		CV	71.21+	56.83+	55.04+	1	137.5	Fire-affected
224	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	4	4.3	
225	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	2	0.6	
226	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	17	4.9	
227	A	Unit 1	Unit	20-30cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	99	24.8	
228	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	7	0.3	Bifacial thinning flakes
229	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	4	0.1	
230	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Primary	CV	-	-	-	4	8.7	
231	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	2	3.5	
232	A	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	2	0.6	
233	A	Unit 1	Unit	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	14	0.8	
234	A	Unit 1	Unit	20-30cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	32	1.9	
235	A	Unit 1	Unit	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	10	475.7	DISCARDED
236	A	Unit 1	Unit	30-40cm	Groundstone	Mano	Fragment		Granitic	25.33+	21.23+	7.66+	1	4.7	Very small fragment, Fire-affected, the curve is slightly convex
237	A	Unit 1	Unit	30-40cm	Groundstone	Metate	Fragment		Granitic	52.41+	25.9+	19.95+	1	35.7	Small fragment, Fire-affected, the curve is convex
238	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	8	2.1	
239	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	22	2.6	
240	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	7	2.2	
241	A	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	68	33.2	
242	A	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	6	0.4	
243	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Primary	Quartzite	-	-	-	1	7.8	
244	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Secondary	Granitic	-	-	-	2	2.2	
245	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	0.4	
246	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	2	0.3	
247	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0.1	
248	A	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0.2	
249	A	Unit 1	Unit	30-40cm	Tool	Utilized Flake	Whole		Milky Quartz	31.61	7.69	5.9	1	1.8	
250	A	Unit 1	Unit	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	35	1	
251	A	Unit 1	Unit	30-40cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	30	2.6	

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Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
252	A	Unit 1	Unit	30-40cm	Bone	Faunal	Worked		Bone	-	-	-	4	0.6	Was one piece. Not sure what it originally was but it feels and looks worked.
253	A	Unit 1	Unit	30-40cm	Tool	Awl	Fragment		Bone	-	-	-	2	0.2	Two small fragments that fit together.
254	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Primary	Milky Quartz	-	-	-	3	1.4	
255	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Secondary	Clear Quartz	-	-	-	5	0.6	
256	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	1	5.7	
257	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0	
258	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	5	0.6	
259	A	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	13	3.8	
260	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Primary	APH-SPV	-	-	-	1	8.5	Green
261	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	6.3	
262	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0.3	
263	A	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.1	Black
264	A	Unit 1	Unit	40-50cm	Ecofact	FAR	Whole		Granitic	-	-	-	1	14.4	DISCARDED
265	A	Unit 1	Unit	40-50cm	Ecofact	FAR	Whole		Milky Quartz	-	-	-	1	14.4	DISCARDED
266	A	Unit 1	Unit	40-50cm	Bone	Faunal	Fragment		Bone	-	-	-	3	0.2	
267	A	Unit 1	Unit	40-50cm	Bone	Faunal	Fragment		Bone	-	-	-	7	0.9	Fire-affected
366	A	Unit 1		Horizon A	Soil Sample				Soil						
367	A	Unit 1		Horizon B	Soil Sample				Soil						
368	A	Unit 1		Horizon C	Soil Sample				Soil						
369	A	Unit 1		Horizon D	Soil Sample				Soil						
370	A	Unit 1		Horizon F	Soil Sample				Soil						
371	B	Unit 1	Unit	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	11	391.5	
274	B	Unit 1	Unit	30-40cm	Groundstone	Metate	Whole		Granitic	230	170	94.07	1	4549	Fire-affected mainly on the bottom. Local material, looks like it was shaped into an oval.
275	B	Unit 1	Unit	40-50cm	Groundstone	Metate	Fragment		Granitic	147.37+	101.66+	98.23+	1	1275	Fire-affected, local material
276	B	Unit 1	Unit	30-40cm	Lithic	Core	Whole		Milky Quartz	44.12	32.86	26.2	1	48.4	4 Flake Scars
277	B	Unit 1	Unit	40-50cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	2	0.2	
278	B	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	0.6	
279	B	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Quartzite	-	-	-	1	0	
280	B	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	2	0	
281	B	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	1.8	
282	B	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	18.4	
283	B	Unit 1	Unit	30-40cm	Lithic	Flake	Whole	Secondary	Granitic	-	-	-	1	1.6	
284	B	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	2	0.4	
285	B	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.4	
286	B	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		Quartzite	-	-	-	1	25.2	
287	B	Unit 1	Unit	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	8.9	
288	B	Unit 1	Unit	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	12	0.4	
289	B	Unit 1	Unit	30-40cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	14	0.8	
290	B	Unit 1	Unit	30-40cm	Tool	Hammerstone	Fragment		Quartzite	32.66+	35.51+	20.44+	1	22.5	
291	B	Unit 1	Unit	30-40cm	Pottery	Tizon Brown Ware	Fragment		Pottery	-	-	-	1	0.1	
292	B	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	2	0.1	
293	B	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	15.5	
294	B	Unit 1	Unit	10-20cm	Pottery	Tizon Brown Ware	Body Sherd		Pottery	-	-	-	3	7.8	
295	B	Unit 1	Unit	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	8	0.2	
296	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Secondary	Obsidian	-	-	-	1	1.6	
297	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	2	3.8	
298	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	11	0.3	
299	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.1	
322	B	Unit 1	Unit	10-20cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	17	0.8	
323	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.1	
324	B	Unit 1	Unit	20-30cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	4	0.6	
325	B	Unit 1	Unit	20-30cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	1	0	
326	B	Unit 1	Unit	20-30cm	Pottery	Tizon Brown Ware	Fragment		Pottery	-	-	-	9	5.9	
327	B	Unit 1	Unit	20-30cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	37	1.3	
328	B	Unit 1	Unit	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	34	0.8	

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Cat#	Locus	Location	Level Type	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
329	B	Unit 1	Unit	20-30cm	Ecofact	FAR	Whole		Granitic	-	-	-	2	50.8	DISCARDED
351	B	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	1	0	
352	B	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	3	0.2	
353	B	Unit 1	Unit	40-50cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	4	0.1	
354	B	Unit 1	Unit	40-50cm	Bone	Faunal	Fragment		Bone	-	-	-	15	0.6	
355	B	Unit 1	Unit	40-50cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	13	0.4	
356	B	Unit 1	Unit	40-50cm	Ecofact	FAR	Whole		Granitic	-	-	-	5	103.4	DISCARDED
357	B	Unit 1	Unit	50-60cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	2	0.5	
358	B	Unit 1	Unit	50-60cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	1	0.1	
359	B	Unit 1	Unit	50-60cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	2	1.9	
360	B	Unit 1	Unit	50-60cm	Tool	Mano	Fragment		Granitic	27.09+	25.48+	10.44+	1	4.6	
361	B	Unit 1	Unit	50-60cm	Bone	Faunal	Fragment		Bone	-	-	-	2	0.1	
362	B	Unit 1	Unit	50-60cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	10	0.2	
363	B	Unit 1	Unit	50-60cm	Ecofact	FAR	Whole		Granitic	-	-	-	5	56.3	DISCARDED
364	B	Unit 1	Unit	Wall Fall	Ecofact	FAR	Whole		Granitic	-	-	-	1	351.8	26cm N of S wall, 9cm depth in W wall
365	B	Unit 1	Unit	Wall Fall	Pottery	Tizon Brown Ware	Fragment		Pottery	-	-	-	1	7.6	36cm N of S wall, 9cm depth with charcoal
371	B	Unit 1	Unit	Horizon A	Soil Sample				Soil						
372	B	Unit 1	Unit	Horizon B	Soil Sample				Soil						
290	B	Unit 1	Unit	0-10cm	Pottery	Tizon Brown Ware	Whole		Pottery	-	-	-	2	7.1	
291	B	Unit 1	Unit	0-10cm	Ecofact	FAR	Whole		Granitic	-	-	-	4	81.1	DISCARDED
292	B	Unit 1	Unit	0-10cm	Bone	Faunal	Fragment		Bone	-	-	-	14	23.3	
293	B	Unit 1	Unit	0-10cm	Bone	Faunal	Burnt Fragment		Bone	-	-	-	11	0.5	
294	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Obsidian	-	-	-	1	0.7	
295	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	6	1.6	
296	B	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	4	0.4	
297	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	1	1.2	
298	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.3	
299	B	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	5	13.1	
300	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	2	2.1	
301	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Secondary	CV	-	-	-	1	1.2	
302	B	Unit 1	Unit	0-10cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	3	1.2	
303	B	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Quartzite	-	-	-	1	1.8	
304	B	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.4	
305	B	Unit 1	Unit	0-10cm	Debitage	Angular Waste	Whole		Granitic	-	-	-	2	4.4	
306	B	Unit 1	Unit	0-10cm	Groundstone	Mano	Fragment		CV	43.6+	23.93	27.31	1	32.2	Fire-affected
307	B	Unit 1	Unit	0-10cm	Groundstone	Mano	Fragment		CV	48.47+	26.87+	18.16	1	32.2	
308	B	Unit 1	Unit	10-20cm	Ecofact	FAR	Whole		Granitic	-	-	-	12	655.7	DISCARDED
309	B	Unit 1	Unit	10-20cm	Tool	Hammerstone	Whole		Quartzite	70.19	43.83+	32.24	1	417.4	
310	B	Unit 1	Unit	10-20cm	Groundstone	Metate	Fragment		Granitic	33.17+	12.02+	1.61+	1	34.3	Local material, slightly Fire-affected
311	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0	
312	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.1	Black
313	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Gabbroic	-	-	-	1	0.2	
314	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	3	1.1	
315	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	8	2.4	
316	B	Unit 1	Unit	10-20cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	1	0.2	
317	B	Unit 1	Unit	10-20cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0	
Material: CV = cobble volcanic (Eocene); SPV = Santiago Peak Volcanic; APH = aphanitic (variety of SPV); LV = Lusardi volcanic															

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Cat#	Location	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
1	Shot# 69	Surface	Ecofact	FAR	Broken and burnt		CV	-	-	-	2	244.7	DISCARDED
2	Shot# 70	Surface	Groundstone	Metate	Fragment		Granitic	180cm+	105.7+	75.40+	1	2307.0	Local Material
3	Shot# 71	Surface	Ecofact	FAR	Whole		CV	-	-	-	1	509.6	
4	Shot# 72	Surface	DISCARD	DISCARD							1		This was thought to a mano but is not. DISCARDED
5	Shot# 73	Surface	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	16.7	
6	Shot# 74	Surface	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	11.1	
7	Shot# 75	Surface	Ecofact	FAR	Whole		Granitic	-	-	-	3	306.3	DISCARDED
8	Shot# 75	Surface	Groundstone	Mano	Fragment		CV	71.26+	70.06+	57.89+	1	348.5	Fire-affected
9	Shot# 75	Surface	Groundstone	Mano	Fragment		CV	87.55+	58.8+	50.08+	1	331.8	Fire-affected
10	Shot# 76	Surface	Groundstone	Mano	Fragment		CV	101.49+	62.75+	58.24+	1	468.8	Fire-affected
11	Shot#77	Surface	Ecofact	FAR	Whole		CV	-	-	-	1	341.4	DISCARDED
12	Shot# 78	Surface	Ecofact	FAR	Whole		CV	-	-	-	1	41.5	DISCARDED
13	Shot# 79	Surface	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.1	
14	Shot# 80	Surface	Pottery	Tizon	Body Sherd		Pottery	-	-	-	1	20.3	
15	Shot# 81	Surface	Ecofact	FAR	Whole		CV	-	-	-	1	120.5	
16	Shot# 83	Surface	Pottery	Tizon	Body Sherd		Pottery	-	-	-	1	4.0	
17	Shot# 81	Surface	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	1.9	
18	Shot# 83	Surface	Ecofact	FAR	Whole		Apnite	-	-	-	1	42.8	
19	Shot# 84	Surface	Groundstone	Mano	Fragment		CV	69.35+	35.26+	52.08	1	122.4	Looks lightly Fire-affected]
20	Shot# 85	Surface	Ecofact	FAR	Whole		CV	-	-	-	1	46.3	
21	STP# 0N/0E	0-10cm	Lithic	Flake	Whole	Primary	Quartzite	-	-	-	1	3.2	
22	STP# 0N/0E	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	5.4	
23	STP# 0N/0E	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	3	4.5	
24	STP# 0N/0E	20-30cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	1.5	
25	STP# 0N/0E	20-30cm	Bone	Faunal	Fragment		Bone	-	-	-	5	0.1	
26	STP# 0N/0E	20-30cm	Groundstone	Mano	Fragment		CV	77.25+	53.21+	19.08+	1	82.4	
27	STP# 0N/0E	20-30cm	Lithic	Flake	Whole	Secondary	Granitic	-	-	-	1	0.6	
28	STP# 0N/0E	20-30cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	2	0.7	
29	STP# 0N/0E	30-40cm	Ecofact	FAR	Whole		Gabbroic	-	-	-	1	61.7	DISCARDED
30	STP# 0N/0E	50-60cm	Ecofact	FAR	Whole		Granitic	-	-	-	2	372.1	DISCARDED
31	STP# 0N/0E	50-60cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	6	0.4	
32	STP# 0N/0E	50-60cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.2	
33	STP# 0N/0E	60-70cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	0.3	
34	STP# 0N/0E	60-70cm	Bone	Faunal	Fragment		Bone	-	-	-	4	0.3	
35	STP# 10N/1W	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	3.9	
36	STP# 10N/1W	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	3	0.4	Gopher skull
37	STP# 0N/5E	0-10cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	1	0.0	Burnt
38	STP# 0N/5E	0-10cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.0	
39	STP# 0N/5E	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	13.3	Partial recurved rim
40	STP# 0N/5E	20-30cm	Ecofact	FAR	Whole		CV	-	-	-	1	60.6	DISCARDED
41	STP# 0N/5E	20-30cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	2	9.2	
42	STP# 0N/5E	30-40cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	4	0.3	
43	STP# 0N/5E	30-40cm	Ecofact	FAR	Whole		CV	-	-	-	1	85.5	DISCARDED
44	STP# 0N/5E	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	0.0	
45	STP# 0N/5.5W	0-10cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	1.9	
46	STP# 0N/5.5W	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	1.1	
47	STP# 0N/5.5W	20-30cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	3	4.6	
48	STP# 0N/5.5W	20-30cm	Groundstone	Mano	Fragment		CV	54.04+	33.64+	57.97	1	155.6	Fire-affected
49	STP# 0N/5.5W	20-30cm	Ecofact	FAR	Whole		Granitic	-	-	-	10	2235.0	
50	STP# 0N/5.5W	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	8	605.0	
51	STP# 0N/5.5W	30-40cm	Groundstone	Mano	Fragment		CV	46.94+	41.06+	22.61+	1	35.6	
52	STP# 0N/5.5W	30-40cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	2	1.3	
53	STP# 0N/5.5W	30-40cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	4	0.4	
54	STP# 0N/5.5W	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	1	0.1	
55	STP# 0N/5.5W	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	1	1.5	
56	STP# 0N/5.5W	30-40cm	Debitage	Angular Waste	Whole		Granitic	-	-	-	1	0.0	
57	STP# 0N/5.5W	40-50cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	4	0.2	
58	STP# 0N/5.5W	40-50cm	Ecofact	FAR	Whole		Granitic	-	-	-	1	34.1	DISCARDED
59	STP# 0N/5.5W	40-50cm	Ecofact	FAR	Whole		Granitic	-	-	-	1	895.0	DISCARDED
60	STP# 0N/5.5W	50-60cm	Bone	Faunal	Fragment		Bone	-	-	-	7	0.7	
61	STP# 0N/5.5W	50-60cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	2	22.3	
62	STP# 0N/5.5W	50-60cm	Lithic	Flake	Whole	Interior	Clear Quartz	-	-	-	1	0.0	
63	STP# 0N/5.5W	50-60cm	Lithic	Flake	Whole	Interior	Quartzite	-	-	-	1	0.1	

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Cat#	Location	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
64	STP# 0N/5.5W	60-70cm	Groundstone	Mano	Fragment		CV	38.98+	11.36+	7.25+	1	4.0	
65	STP# 0N/5.5W	60-70cm	Bone	Faunal	Fragment		Bone	-	-	-	1	0.2	
66	STP# 0N/5.5W	70-80cm	Lithic	Flake	Whole	Secondary	APH-SPV	-	-	-	1	1.6	Green
67	Unit 1	0-10cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	1	1.5	
68	Unit 1	0-10cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	2	11.5	
69	Unit 1	0-10cm	Tool	Projectile Point	Fragment		Milky Quartz	24.43+	12.02+	5.23+	1	1.6	Possibly a Desert Cottonwood
70	Unit 1	0-10cm	Groundstone	Mano	Burnt and fragmented		CV	17.92+	15.89+	14.07+	1	3.8	
71	Unit 1	0-10cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	4	0.5	
72	Unit 1	0-10cm	Bone	Faunal	Fragment		Bone	-	-	-	7	0.3	
73	Unit 1	0-10cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	7	24.1	Large piece has black residue inside (possible piece to do a residue analysis)
74	Unit 1	0-10cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	0.5	
75	Unit 1	10-20cm	Ecofact	FAR	Whole		Granitic	-	-	-	12+	1600+	Very friable
76	Unit 1	10-20cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	9	21.0	
77	Unit 1	10-20cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	3.8	
78	Unit 1	10-20cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	8	0.6	
79	Unit 1	10-20cm	Bone	Faunal	Fragment		Bone	-	-	-	4	0.2	
80	Unit 1	10-20cm	Lithic	Flake	Whole		Milky Quartz	-	-	-	1	0.2	
81	Unit 1	10-20cm	Debitage	Angular Waste	whole		Milky quartz	-	-	-	6	2.4	
82	Unit 1	10-20cm	Lithic	Flake	Whole	Interior	Granitic	-	-	-	1	0.0	
83	Unit 1	20-30cm	Bone	Faunal	Whole		Bone	-	-	-	10	0.9	
84	Unit 1	20-30cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	8	0.4	
85	Unit 1	20-30cm	Ecofact	FAR	whole		Granitic	-	-	-	3	151.4	
86	Unit 1	20-30cm	Groundstone	Mano	Burnt and fragmented		CV	54.75+	45.54+	21.01+	1	56.3	
87	Unit 1	20-30cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	11	28.6	
88	Unit 1	20-30cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	11.8	
89	Unit 1	20-30cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	2.9	
90	Unit 1	20-30cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	2.8	
91	Unit 1	20-30cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	6	5.0	
92	Unit 1	20-30cm	Lithic	Flake	Whole	Secondary	Milky Quartz	-	-	-	3	1.3	
93	Unit 1	20-30cm	Lithic	Flake	Whole	Secondary	CV	-	-	-	1	7.0	
94	Unit 1	20-30cm	Lithic	Flake	Whole	Secondary	APH-SPV	-	-	-	2	2.6	Very patinated
95	Unit 1	20-30cm	Debitage	Angular Waste	Whole		Granitic	-	-	-	1	0.5	
96	Unit 1	20-30cm	Shell	Bead	Whole and burnt		Olivella	13.24	8.08	-	1	0.4	Burnt
97	Unit 1	30-40cm	Ecofact	FAR	Whole		Granitic	-	-	-	8	488.3	
98	Unit 1	30-40cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	46	150.4	One piece has residue on the inside
99	Unit 1	30-40cm	Debitage	Angular Waste	Whole		Obsidian	-	-	-	2	6.2	
100	Unit 1	30-40cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	20	1.8	
101	Unit 1	30-40cm	Bone	Faunal	Fragment		Bone	-	-	-	36	5.0	Includes a rodent jaw
102	Unit 1	30-40cm	Pottery	Tizon Brown	Fragment		Rim Sherd	-	-	-	1	0.9	
103	Unit 1	30-40cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	9	2.9	
104	Unit 1	30-40cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	3	0.2	
105	Unit 1	30-40cm	Lithic	Flake	Whole	Secondary	Quartzite	-	-	-	2	6.2	
106	Unit 1	30-40cm	Lithic	Flake	Whole	Secondary	POR-SPV	-	-	-	1	4.7	Heavily patinated
107	Unit 1	30-40cm	Shell	Unknown	Burnt and fragmented		Unknown	-	-	-	na	0.0	Too small of fragments to tell what the species is.
108	Unit 1	30-40cm	Shell	Bead	Burnt and fragmented		Olivella	12.70+	6.18+	-	1	0.3	
109	Unit 1	30-40cm	Lithic	Flake	Whole	Interior	Obsidian	-	-	-	1	0.0	
110	Unit 1	10-20cm	Lithic	Crystal	Fragment		Tourmaline	7.67+	7.95+	-	1	0.8	Black, occurs naturally in the area. May or may not be cultural
111	Unit 1	40-50cm	Shell	Bead	Fragment		Olivella	na	na	-	1	0.2	very fragmented into several pieces but was originally collected as one whole bead.
112	Unit 1	40-50cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	4	4.5	
113	Unit 1	40-50cm	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	1	3.8	
114	Unit 1	40-50cm	Bone	Snake	Whole		Vertebra	-	-	-	1	0.2	
115	Unit 1	40-50cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	22	0.7	
116	Unit 1	40-50cm	Bone	Faunal	Fragment		Bone	-	-	-	45	3.2	
117	Unit 1	40-50cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	9	7.6	
118	Unit 1	40-50cm	Lithic	Flake	Whole		Milky Quartz	-	-	-	2	0.0	
119	Unit 1	40-50cm	Lithic	Flake	Whole		APH-SPV	-	-	-	1	0.0	Black, occurs naturally in the area. May or may not be cultural
120	Unit 1	50-60cm	Shell	Bead	Whole		Olivella	16.69	10.11	-	1	3.5	
121	Unit 1	50-60cm	Shell	Possible bead fragment	Burnt and fragmented		Olivella	-	-	-	1	0.0	

CA-SDI-18322 CATALOGUE

Cat#	Location	Level	Class	Type	Condition/Style	Reduction	Material	Length(mm)	Width(mm)	Thickness(mm)	Count	Weight (g)	Comments
122	Unit 1	50-60cm	Tool	Unifacial Flaked Tool	Whole		APH-SPV	48.69	31.51	15.92	1	22.7	Green, heavily patinated, unifacially flaked, wear on approximately 70% of the edge.
123	Unit 1	50-60cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	6	15.6	
124	Unit 1	50-60cm	Ecofact	FAR	Whole		CV	-	-	-	1	16.5	
125	Unit 1	50-60cm	Lithic	Flake	Whole	Interior	POR-SPV	-	-	-	1	0.2	
126	Unit 1	50-60cm	Lithic	Flake	Whole	Secondary	POR-SPV	-	-	-	1	1.2	Green, heavily patinated
127	Unit 1	50-60cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	5	3.7	
128	Unit 1	50-60cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	17	1.2	
129	Unit 1	50-60cm	Bone	Faunal	Fragment		Bone	-	-	-	12	0.6	
130	Unit 1	60-70cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	11	28.9	
131	Unit 1	60-70cm	Shell	Haliotis	Broken and burnt		Shell	-	-	-	1	0.3	
132	Unit 1	60-70cm	Lithic	Flake	Whole	Primary	Quartzite	-	-	-	1	29.6	Flake looks like it came off a hammerstone. One side of flake has battering and crushing.
133	Unit 1	60-70cm	Debitage	Angular Waste	Whole		Quartzite	-	-	-	2	2.0	
134	Unit 1	60-70cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	1	0.5	
135	Unit 1	60-70cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	3	1.2	
136	Unit 1	60-70cm	Tool	Biface tip	Tip fragment		Milky Quartz	18.36+	9.54+	5.48+	1	0.9	Tip is rounded
137	Unit 1	60-70cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	23	1.1	
138	Unit 1	60-70cm	Bone	Faunal	Fragment		Bone	-	-	-	1	1.3	
139	Unit 1	60-70cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.0	Green, very patinated
140	Unit 1	60-70cm	Shell	Bead	Whole and burnt		Olivella	15.01	7.48	-	1	0.4	
141	Unit 1	60-70cm	Shell	Bead	Whole and burnt		Olivella	15.84	7.18	-	1	0.5	
142	Unit 1	60-70cm	Shell	Bead	Whole and burnt		Olivella	13.42	6.24	-	1	0.2	
143	Unit 1	60-70cm	Shell	Bead	Whole and burnt		Olivella	10.07	6.24	-	1	0.2	
144	Unit 1	60-70cm	Shell	Bead	Burnt and fragmented		Olivella	-	-	-	3	0.2	
145	Unit 1	70-80cm	Ecofact	FAR	Whole		Quartzite	-	-	-	1	97.1	DISCARDED
146	Unit 1	70-80cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	2	2.7	
147	Unit 1	70-80cm	Lithic	Flake	Whole	Interior	Milky Quartz	-	-	-	2	0.5	
148	Unit 1	70-80cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	2	0.2	
149	Unit 1	70-80cm	Debitage	Angular Waste	Whole		Granitic	-	-	-	1	0.3	
150	Unit 1	70-80cm	Shell	Unidentified	Burnt and fragmented		Unknown	-	-	-	7	0.1	
151	Unit 1	70-80cm	Shell	Pecten (possibly)	Fragment		Shell	-	-	-	1	0.0	Well worn ridges that look like <i>Argopecten sp.</i> on one side
152	Unit 1	70-80cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	14	0.9	
153	Unit 1	70-80cm	Bone	Faunal	Fragment		Bone	-	-	-	13	0.7	
154	Unit 1	80-90cm	Lithic	Flake	Whole	Primary	CV	-	-	-	1	50.2	
155	Unit 1	80-90cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	16	0.8	
156	Unit 1	80-90cm	Bone	Faunal	Fragment		Bone	-	-	-	14	0.9	11 of the bones are bird bone
157	Unit 1	80-90cm	Debitage	Angular Waste	Whole		APH-SPV	-	-	-	1	0.1	green grey
158	Unit 1	80-90cm	Ecofact	Charcoal	Fragment		Charcoal	-	-	-	15	0.3	Not clearly associated with any cultural feature but collected anyway
159	Unit 1	80-90cm	Debitage	Angular Waste	Whole		Milky Quartz	-	-	-	2	1.2	
160	Unit 1	80-90cm	Debitage	Angular Waste	Whole		Clear Quartz	-	-	-	2	0.1	
161	Unit 1	90-100cm	Ecofact	FAR	whole		Granitic	-	-	-	1	341.3	
162	Unit 1	90-100cm	Groundstone	Mano	Burnt and fragmented		CV	65.53+	52.05+	15.15+	1	53.2	
163	Unit 1	90-100cm	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	4	0.0	teeny tiny fragments
164	Unit 1	90-100cm	Bone	Faunal	Fragment		Bone	-	-	-	3	0.1	
165	Unit 1	90-100cm	Bone	Faunal	Burnt and fragmented		Bone	-	-	-	5	0.0	
166	Unit 1	-	Soil Sample				Soil	-	-	-	1	na	Unit 1 soil sample
167	Unit 1	Wall Fall	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	1	4.6	Fell in from top while digging 60-70cm level
168	Unit 1	Wall Fall	Pottery	Tizon Brown	Body Sherd		Pottery	-	-	-	2	0.2	Fell in from top while digging 30-40cm level
169	Unit 1	Wall Fall	Pottery	Tizon Brown	Rim Sherd		Pottery	-	-	-	2	4.8	Fell in from top while digging 30-40cm level
170	Unit 1	Wall Fall	Lithic	Flake	Whole	Interior	APH-SPV	-	-	-	1	0.3	Fell in from top while digging 30-40cm level, very patinated
171	Unit 1	Wall Fall	Lithic	Flake	Whole	Interior	Granitic	-	-	-	1	0.2	Fell in from top while digging 30-40cm level
172	Unit 1	Wall Fall	Bone	Rodent	Fragment		Rodent	-	-	-	1	0.2	Fell in from top while digging 30-40cm level
173	Unit 1	Wall Fall	Ecofact	FAR	Whole		CV	-	-	-	1	80.0	DISCARDED
Material: CV = cobble volcanic (Eocene); SPV = Santiago Peak Volcanic; APH = aphanitic (variety of SPV); POR = porphyritic (variety of SPV)													

APPENDIX D

PHOTOGRAPH LOGS

PHOTOGRAPH RECORD

Page 1 of 1

Resource Name or # (Assigned by recorder): NM-S-1 and NM-S-2

Year: 2007

Camera Format: Digital

Negatives Kept at: Laguna Mountain Environmental, Inc.

[illegible]

APPENDIX E

RECORDS SEARCH CONFIRMATIONS
AND
SITE LOCATIONS

(With Confidential Figures)

APPENDIX F

SITE FORMS AND SITE FORM UPDATES

(With Confidential Appendices)

APPENDIX G

CONFIDENTIAL FIGURES

(With Confidential Appendices)